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TRANSACTIONS

OF THE

MICHIGAN

STATE MEDICAL SOCIETY

FOR THE YEAR 1879.

No. III.–VOL. VII.

LANSING:
W. S. GEORGE & CO., PRINTERS AND BINDERS.
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PREFACE.

The author is afforded this medium through which to reach the public; but the Society, in directing a publication, must not be understood as indorsing the views or opinions expressed in it; and while they invite candid criticism, they deprecate any other.

FOURTEENTH ANNUAL MEETING AND THIRTEENTH ANNUAL REPORT

OF THE

MICHIGAN STATE MEDICAL SOCIETY.

First Day—Morning Session.

The fourteenth annual meeting of the Michigan State Medical Society was opened on Wednesday morning, June 11, 1879, at 10 o'clock, in St. Andrew's Hall at Detroit.

The meeting was called to order by the President, Dr. Edward Cox, of Battle Creek, and was opened with prayer by Rev. R. W. Clark, of St. Paul's Church.

ADDRESS OF WELCOME.

An address of welcome on behalf of the profession of the city was made by Dr. Wm. Brodie, as follows:

MR. PRESIDENT AND GENTLEMEN:—In behalf of the medical profession and citizens of Detroit, I tender you a cordial welcome.

To many of you our city is almost as familiar as your own homes. Occupying the position of the commercial capital of the State (she should also have continued her political one), you are all interested in her growth and prosperity. While many of her sister cities have suffered from the hard times of the past few years, there has been no interruption in her growth, and but few of her business men have succumbed from financial disabilities.

Her population has reached to almost 130,000. Her financial condition challenges that of any other city, whether large or small. The annual report of the comptroller, made February 18, 1879, gives her net debt as $771,581.56. Her income from the sinking fund for this year will be near $110,000, which of itself, if no further bonds are issued, would almost pay the debt in seven years, without any taxation to her citizens.

In salubrity she has no equal, furnishing her people with an

abundant supply of clear and wholesome water, with an extensive sewerage, reaching from the river to her northern limits, located in almost every other street that runs north and south, and these traversed with laterals in almost every alley, thus draining every house and carrying the washings into the river, where it is lost in the broad expanse of Lake Erie; with a cultivated and well-drained country on her three sides, and the broad expanse of the Detroit river on the fourth; with her broad streets and shaded avenues, she is protected alike from the extremes of both heat and cold. Her list of interments for 1878 was 2,025, as shown by the report of the Board of Health, being a death-rate of 13½ per thousand.

Recognizing the value of a liberal education, made free to all by constitutional obligation, she furnishes to every child of the proper age a seat in a public school, and has extended these advantages to such a degree as to prepare her children to enter the highest educational institutions in the land.

She has supplemented her educational advantages by the erection of a public library, whose volumes now on the shelves number over 40,000. The whole number of books drawn and consulted for the year 1878 was about 191,000, and the number of registered borrowers was 15,000. I need not call your attention to her broad streets, her public buildings, her manufactories, nor to the beautiful river, which forms the boundary line between the two great political divisions into which the continent of North America is divided, and upon whose bosom floats the commerce of the great chain of lakes. We, residing here, are proud of our city, and we know, also, that you, too, feel an interest in our growth and prosperity.

Gentlemen, you have met here in the interests of the noblest of professions; you have met to again greet each other and renew the friendship formed in years gone by. Science is extending her benefits to our race, and the department you represent can claim its position in the foremost ranks. To prolong life, to discover the causes of disease and how to remove them, is, and has been, your great mission; and when dread pestilence has invaded our land, neither the fear of death nor pecuniary loss has prevented you from being the foremost in the great cause of humanity. It is an honor to be a member of such a profession; and as we meet in this hall to review the past, to enjoy the present, and prepare for the future, may we also remember that we, too, are mortal. May we also remember that we are one common brotherhood, laboring together for a common interest—the prolongation of human life.

I need not repeat that you are cordially welcome. Our public institutions will be open to your inspection, and the hospitality of our citizens will be open for your physical enjoyment. In the language of Michigan's motto, we bid you "Circumspice."

The roll was then called by the Secretary, when a goodly number of members responded to their names.

On motion of Dr. Foster Pratt, the reading of the minutes of the previous meeting was dispensed with.

The following report of the Executive Committee was then read by its Chairman, Dr. Brodie:

The Executive Committee respectfully report that they have engaged the hall now occupied by this convention for its use, and at no expense to the Society. They have had prepared a pro-

gramme for your guidance, subject to your approval, giving the order of business and the assignment of time for the reading of papers whose titles have been forwarded to the committee. They would recommend that the hour of adjournment on the first day be 12.30 P. M., and the hour of assembly 2 o'clock; for Thursday, meet at 9 A. M., adjournment 12.30 P. M., and assemble at 2 o'clock. The Executive Committee invite you and your ladies to a reception at the residence of Dr. Brodie, No. 64 Lafayette avenue, at the corner of Wayne, at 8 o'clock this evening. The honorable the Board of Water Works invite you to visit their new works at any time you may elect. Messrs. Park, Davis & Co. also invite you to visit their laboratory, at the foot of McDougal avenue, when it may suit your convenience. Your committee would recommend, that if you accept the above, the time be fixed at 4½ o'clock this afternoon, when a steamer will be in readiness to convey you to both places.

The Board of Inspectors and Superintendent of the House of Correction invite you to visit that institution at your convenience, and will be happy to show you what may be of interest. The Board of Fire Commissioners invite you to visit their engine houses and show you the automatic arrangement for attaching the horses to the engine, the lighting of the fires in the engine by electricity, and such other matters of exceeding interest. The Public Library in East Park, by its committee, also invite you to visit and inspect the same, and the Detroit Medical and Library Association have kindly tendered you the use of their hall for the meetings of committees, No. 3 Cranage block, Lafayette avenue. The profession generally will be happy to see you in their offices, and otherwise entertain you.

Dr. Pratt moved the acceptance of the report of the committee and its adoption, so far as it related to the programme of exercises.

Carried.

The Society was cordially invited, through Dr. Brodie, Chairman of the Executive Committee, to visit during the days of its session the following places:

Detroit Public Library—Invitation by Michael Firnane, President, and Robert E. Roberts, Chairman Library Committee.

Detroit House of Correction—Invitation by Wm. Foxen, Chairman Board of Inspectors.

Detroit Fire Department Buildings—Invitation by Jerome Croul, President of the Fire Commission.

The Detroit Water Works—Invitation by Henry Starkey, Secretary Detroit Water Commission.

The Detroit Medical Library—Invitation by Dr. E. L. Shurley, President.

An invitation was also received from Park, Davis & Co., to take an excursion on the river and visit their chemical laboratory and manufacturing establishment.

The invitations were, on motion of Dr. Pratt, all accepted,

with thanks, and four o'clock fixed as the time of adjournment to take the excursion.

Dr. Brodie said that at 4.15 o'clock the steamer Gazelle would be at the foot of Griswold street, from where the party would proceed directly to visit the establishment of Park, Davis & Co. and the Detroit Water Works.

Dr. Brodie, on behalf of the Executive Committee, extended an invitation to the members and their ladies to attend a reception at his house at 8 o'clock P. M.

Accepted.

Proposals for membership being next in order, a number of applications were made and referred to the Committee on Admission.

On motion, a recess of five minutes was taken, to afford the members an opportunity to pay their dues, after which reports of standing committees were called for. Dr. Porter of Kalamazoo and Dr. Klein of Detroit were appointed to fill vacancies on the Finance Committee, caused by the death of Dr. Beech and absence of Dr. Brownell.

Dr. Connor was appointed by the President to act as one of the Committee on Admissions in place of Dr. Main, absent.

The Secretary here reported the names of a number of applicants, and moved that they be referred to the Committee on Admissions.

Carried.

Dr. Brodie announced the presence of Drs. Edmund Andrews and S. G. Jones, delegates from the Illinois State Medical Society, and Dr. H. Dubois, of the New York State Medical Society, and, on his motion, were invited to take a seat on the platform. They were accordingly escorted to the platform by the Secretary, and were formally introduced to the Society by Dr. Brodie.

The President, in welcoming the visiting brethren, said: We welcome you as representatives of the brotherhood of medicine of the Prairie State, and of the great State of New York, my native State, and I am particularly happy to meet you; and in behalf of the Society, I welcome you to seats in our Society, and ask you to take part in our deliberations.

Dr. Henry F. Lyster was announced and received as a delegate from the Michigan State Board of Health, who was appointed by said Board to attend this meeting in the interests of public health.

Reports of standing committees were then called for.

Dr. Eugene Smith, Chairman of the Committee on Opthalmology, said that he had had no papers presented to his com-

mittee; that modesty, of course, prevented him from reporting his own paper, which had been placed in the hands of the Executive Committee.

Dr. Brodie said that he understood that the amendment to the by-laws, adopted last session, providing for committees on papers, was intended to provide for the presentation by the chairmen of the different sections, of papers in their several departments.

Dr. Pratt said: No; the purpose of the committees, Mr. President, as interpreted last year, was to pass judgment upon papers referred on the various topics, for the purpose of having the judgment of the committee as to the propriety of their being read, and to know from the committee how long the paper would be, and how much time would be required to read, and whether, if too long for reading as a whole, what portion, if any, should be read. At least, it was so considered a year ago; that these committees were not to report upon their several departments at all, but merely to pass in the manner I have mentioned upon these papers referred to their departments.

Dr. Eugene Smith said that that was his understanding of the matter, and in that spirit he had worked thus far.

Dr. Brodie said he took a different view of it, and expected these gentlemen would come here with reports as to the different departments.

Dr. Carstens, the author of this amendment, said that its object was to provide committees who would see to the procuring of papers for their several departments.

Dr. Bennett, chairman of the Committee on Obstetrics, said that his committee was not ready to report.

On motion of Dr. Brodie, the regular order was suspended, and the Secretary and Treasurer called upon for their reports.

REPORT OF THE RECORDING SECRETARY.

To the Members of the Mich. State Medical Society:

GENTLEMEN:—in conformity to the requirements of the by-laws I herewith present my annual report.

Exclusive of those elected at this meeting and those whose names have been dropped from the roll of membership on account of long arrearages in payment of dues, there are borne upon the roll of membership of this Society 268 names. Dr. J. H. Beech and Dwight Nims, honored members of the Society, died since the last annual meeting.

There were read at the last meeting of the Society the following papers, viz.:

Legal Relations of Insane Patients, by the President, Dr. Foster Pratt, of Kalamazoo.

Varicose Ulcers—their Treatment by Esmarch's Bandage, by Dr. O. B. Campbell, of Ovid.

Medical Education of the People their Best Safeguard, by Dr. T. N. Reynolds, of Detroit.

Smallpox Epidemic at Dearbornville, by Dr. S. P. Duffield.

Scarlatina, Dr. J. Henry Carstens, of Detroit.

Asthenopia, by Dr. Eugene Smith, of Detroit.

The use of Obstetric Forceps in Country Practice, by Dr. G. W. Topping, of DeWitt.

Herpetic and Eczematous Eruptions in the Etiology of Chronic Nasal Catarrh, by Dr. E. L. Shurley, of Detroit.

Suppurative Inflammation of the Middle Ear, by Dr. Eugene Smith, of Detroit.

On the Prevention of Delay in some Presentations of the Breech, by Dr. A. F. Kinnie, of Ypsilanti.

I made a *verbatim* report of the last meeting, and as chairman of the Publication Committee, prepared the transactions for the press. I also reported as fully as practicable the reception given at the Lansing House in honor of the Society.

Two hundred and fifty-three letters and postal cards were written by me during the past year in interest of the Society.

Seven hundred copies of the transactions for 1878 were published at a cost of $245.85, of which number 413 copies have been distributed, as in former years, leaving 287 on hand. Two thousand copies of the President's address were printed at a cost of $60, fifteen hundred of which have been distributed to lawyers and physicians of this and other States, to men in official position, and other prominent people. Five hundred copies are remaining on hand, somewhat damaged by fire, which occurred in my building last November.

I have collected during the year for initiation fees and dues	$517 00
Deposited with Treasurer	474 00
Balance of amount collected	$43 00

I have expended moneys as follows:

For postage on President's address, transactions, notices, letters, etc.	$49 62
For stationery	2 00
For Mich. Central Railroad rate certificates	1 88
Total	$53 50

Balance due Recording Secretary, $10.50.

The President, Executive Committee, and Recording Secretary, as per resolution of the Society, at its last meeting, appointed delegates to the American Medical Association as follows:

Dr. Wm. Brodie, of Detroit.
E. S. Dunster, of Ann Arbor.
E. F. Chester, of Cedar Springs.
C. V. Beebe, of Howell.
Leartus Connor, of Detroit.

Dr. C. H. Lewis, of Jackson.
J. D. Hartley, of Ann Arbor.
A. G. Sinclair, of Detroit.
G. W. Topping, of DeWitt.
J. H. Jerome, of Saginaw.
H. Tupper, of Bay City.
Foster Pratt, of Kalamazoo.
M. W. Tomlinson, of Battle Creek,
C. G. Cruikshank, of Howell.
Eugene Smith, of Detroit.
R. C. Kedzie, of Lansing.
A. M. Bucknam, of Parma.
G. K. Johnson, of Grand Rapids.
H. C. Wyman, of Blissfield.

With the assistance of Dr. Eugene Smith, of Detroit, and Dr. C. H. Lewis, of Jackson, reduced rates of fare over two different railroad routes to Atlanta were secured for the benefit of this and local societies in correspondence with this Society, and other Michigan members of that Association, and notices of the arrangements were communicated to each delegate and to each medical society in the State in correspondence with this.

I distributed 450 notices of this meeting, together with railroad certificates, entitling the holder to reduced rates of fare over certain lines; also sent, by request of the chairman of the Executive Committee, a request to each member of the Society to send title of, and a probable length of time it would take to read, any paper they might design to present at this meeting. Advertisements of this meeting were inserted in the Detroit Post and Tribune and Detroit Free Press. I also procured the insertion, as far as practicable, of local notices of this meeting in newspapers throughout the State.

On pages 194 and 195 of the Minutes of the Transactions, Dr. Carstens is given credit for remarks made by Dr. Shurley. A few other minor errors in the 78 pages of closely printed matter prepared by me unavoidably crept in. I have been requested to look for an error in the notice given on the fourth page of the cover of the Transactions, and have accordingly examined it carefully, and I confess I fail to recognize any mistake, for the simple reason that there is none.

Very respectfully submitted.

GEO. E. RANNEY,
Recording Secretary.

Dr. Brodie moved that the report be accepted, and that portion relating to finance be referred to the Finance Committee.

Accepted and referred to the Finance Committee.

REPORT OF TREASURER.

To the President and Members of the Mich. State Medical Society:

The following financial report is respectfully submitted for your consideration:

G. W. Topping, Treas., in acc't with Mich. State Medical Society.

			Dr.
1878.			
May 16.	To amount received of Dr. Geo. E. Ranney, Sec'y..		$474 00
May 22.	To amount received (by draft) of G. Chittock, ex-Treasurer		159 66
1879.			
June 1.	To interest, at 5 per cent, on balance in Central Mich. Savings Bank		10 56
	Total receipts for the year		$644 22
1878.		Cr.	
May 18.	By payment to Dr. Geo. E. Ranney, on account as per bill marked (A)	$16 90	
May 18.	By amount paid Recording Secretary Ranney for services for year ending May 16, 1878	100 00	
May 18.	By payment to Detroit Free Press Co. for advertising annual meeting of 1878	15 00	
May 24.	By payment to Post and Tribune Co. for advertisement of meeting for 1878	10 50	
July 29.	By payment to Calvert Lith. and Engraving Co., 2 reams letter heads for Sec'y	14 00	
Aug. 26.	By amount paid for account book for use of Treasurer of Society	40	
Sept. 6.	By amount paid W. S. George & Co. for printing Transactions, etc.	305 85	
Sept.	By exchange, 30 cts.; postage, 9 cts.; revenue stamps, 6 cts.	45	
	Total disbursements for the year	$463 10	
1879.			
June 1.	Balance in hands of Treasurer		$181 12

G. W. TOPPING,
Treas. Mich. State Med. Society.

On motion of Dr. Brodie, a recess of five minutes was then taken, to allow the recently elected members to sign the constitution and by-laws and pay their initiation fees and dues.

The President then called the meeting to order, and Dr. Eugene Smith said:

Mr. Chairman—For the purpose of getting from this association an expression of opinion with regard to the sign business, for which some of the members will perhaps remember I was hauled over the coals some years since, I would remark, with the greatest of good feeling toward the gentleman affected, who I see is present, that there is a member of this association who has his sign out, "Physician and Surgeon, Oculist and Aurist." With the friendliest feeling toward this gentleman, as a member of this Society, though thus calling the attention of the association to him (and I think he is none the

worse for having his sign out as "Oculist and Aurist,") if one member has this privilege, I want it, as an exclusive specialist.

Dr. Brodie suggested that the proper course to take, if the gentleman had any charges to make, would be to reduce them to writing, and without debate refer them to the judicial council.

Dr. Smith continued: I am not making any charges. I want an expression of this body, if I can get it in this way.

Dr. Brodie called the gentleman to order.

The Chair ruled that in a matter of explanation simply Dr. Smith had the floor.

Dr. Smith—The following report has been adopted by this Society, and what I want to get at is an interpretation of it by the Society, in order that I may govern myself accordingly:

The acceptance of this honorable title "Doctor" is presumptive evidence to the community that the man accepting it is ready to attend practically to any and all duties which it implies. As all special practice is simply a self-imposed limitation of the duties implied in the general title of doctor, it should be indicated not by special titles, such as oculist, gynæcologist, etc., nor by any positive setting forth of special qualifications, but by a simple, honest notice appended to the ordinary card of the general practitioner, saying "practice limited to diseases of the eye or ear," or "to diseases peculiar to women," or to "midwifery exclusively," as the case may be.

It strikes me that that is a distinction without a difference. They allow us to put on our business cards, which I think very few of us use, "attention limited to diseases of the eye," but we cannot put out "oculist" to attract the attention of the people. If this clause settles the matter in that way, my brother, the doctor who has his sign out as "oculist and aurist," should take it down, or I should be allowed to put my sign out as such.

The Chair decided that the article quoted was sufficiently explicit and fully binding on the Society.

On motion of Dr. Pratt the matter was referred to the judicial council, and Dr. Smith was requested to file with the council charges against the doctor referred to by him, in order that the whole question might be considered there.

After some further remarks by Drs. Hitchcock, Brodie, Smith and Carstens, Dr. Pratt moved that Dr. Smith be requested to file with the Society charges against the doctor referred to by him (Smith), in order that the whole question might be referred to the judicial council.

Carried.

Dr. Ranney said that he had some charts and other printed

matter representing and explaining the decimal or metric system of weights and measures, which had been sent to him by Dr. Wigglesworth, of Boston, a teacher in the Harvard Medical College; that the charts could be seen on the wall, and the other printed matter would be distributed among the members.

Dr. Briggs, Chairman of the Committee on Admissions, then made a partial report recommending candidates for admission.

Report accepted and adopted.

Adjourned until 2 o'clock P. M.

Afternoon Session.

The meeting was called to order at 2 o'clock by the President, Dr. Cox, who was supported by Vice Presidents Whelan, Thomas, Banks and Dunning. On motion, the reading of the minutes of the forenoon session was dispensed with.

The President then asked Vice-President Whelan to preside, who, on taking the chair, said: According to the programme prepared by the Executive Committee and adopted by the Society, the hour has now arrived in which we will listen to the address of the President.

Dr. Cox, the President, then proceeded to deliver his inaugural address upon "Criminal Abortion," which was listened to with interest by those present, accepted with thanks and referred to the Publication Committee.

Dr. Foster Pratt, of Kalamazoo, said that for one he was not satisfied with a simple reference of the address to the Publication Committee with thanks. There have been some suggestions made by the President, based upon information which is more or less within the possession of all the members, —information that he presumed all believed to be true, relating to evils that should be suppressed. He was in favor of referring this address to a special committee of five, to report either at this or the next meeting, as may be thought best, what measures the members of this Society as a profession can and ought to take in reference to abating the evil which has here been discussed so ably.

Dr. Brodie supported the motion, and the address was referred to a special committee, to be appointed by the Chair, to report at the next meeting.

Dr. E. P. Christian, of Wyandotte, then read a paper entitled "Observations upon the Shortness of the Umbilical Cord as a cause of Retarding Labor and of Accident."

Referrred, on motion of Dr. Johnson, to the Publication Committee.

The Committee on Admissions reported favorably on a number of applications, and adversely on the case of an applicant for membership who had been refused admission into a local society in Detroit.

The Chairman of the Committee, Dr. Briggs, said: To the application of Dr. W. S. Wells, who was recommended by my friend Dunster and some one else, which was laid over from the last annual meeting, there have been objections made, but at that time he was under charges before the Society, from which I understand he has been acquitted. Your committee are not fully able to determine the merits of the case. It is stated that he deals in some wonderful secrets; something that we know nothing of. There are those here who are fully acquainted with the facts, and we would be pleased to hear from them.

Dr. Brodie moved that the report be accepted and adopted, except so much of it as refers to Dr. Wells, and that that be referred back to the committee.

The motion was supported by Dr. Jerome, and was carried.

Dr. Brodie announced the presence of Dr. James Jameson, of Sampson, Ont., and moved that he be elected member by invitation, as representing the St. Clair Medical Society, of Canada.

Carried.

Dr. Geo. K. Johnson, of Grand Rapids, then read a paper entitled "Two Cases of Hodgkins' Disease, or Lymphadenosis," which cases he illustrated by life-size photographs.

Dr. Jenks moved that the paper be referred to the Committee on Publication.

Dr. Brodie moved that the thanks of the Society be given to Dr. Johnson for the skilful manner in which it was presented to the Society.

Dr. Palmer—I wish to say that I heartily approve of its publication, as cases of this kind are of very great interest. I call to mind during the reading of the paper some five or six, perhaps seven or eight cases I have seen of this form of disease. One I would refer to, as brought to my office by Dr. Breakey —I see the Doctor is here—occurring in a young man, and I bring up this case particularly to mention one fact in connection with it: A young man who had previously been in good health, a young laboring man, born in Ireland I believe, though

a very respectable young man, who had enlargement of these glands and the usual anæmia which accompanies this enlargement. I saw him and made an unfavorable prognosis of his case. Soon after he had a most profuse hemorrhage from the nose; he bled, it is said, some quarts of blood, and to the astonishment of everybody the glands diminished perhaps two-thirds in the course of a very short period, and the young man thought he was about to get well. He went into the hands of another physician who pronounced a very favorable opinion. I saw him after this hemorrhage occurred, and he appeared better for some weeks, but ultimately, of course, the anæmia increased. He experienced very great difficulty in breathing, while these glands were enlarged—enlarged in the chest, as well as externally about his neck, about his chest and about other parts of his person. He breathed with great difficulty; but he, as well as his physician, had great hopes of his recovery at that time. But ultimately the anæmia continued, the glands did not grow as much afterward, but he sank and died from the anæmia. I have seen an examination of the blood from some of these cases, and in all cases that I now remember of particularly, the blood corpuscles were small, shriveled, and irregular in form. I believe that these are blood glands, and although they may not be of the relation of cause and effect, between the enlargement of the glands or disease of the glands and anæmia, which is so sure to follow, yet I believe the diseased glands have their influence in producing imperfect blood corpuscles.

This relation of cause and effect seems to extend between the enlargement of the glands and the anæmia which follows, and this opinion has been confirmed by a few reported cases, one, particularly, reported by Prof. Green, of Bowdoin College, who has operated upon some of the glands externally, removing them with great advantage to his patient, in a comparatively early stage, and the patient was still alive and doing well several months after the operation. Whether it will be an ultimate recovery or not I do not know. I understand the German surgeons are very much in favor of an operation at an early period. Dr. Andrews is here and I would be very glad to hear from him on the subject.

The proceedings were rather abruptly brought to a close by the announcement that the time for the excursion on the river had arrived. The motion to refer to the Publishing Committee was carried, and the Society adjourned to take the boat that was in waiting to carry its members to the establishlishment of Park, Davis & Co. and to the Detroit Water Works.

Second Day—Morning Session.

9 o'clock A. M.

The meeting was called to order by the President.

The President requested the Vice Presidents to come forward to the platform.

Roll called.

On motion, the reading of the minutes was dispensed with.

The Chairman of the Committee on Membership, Dr. Briggs, made a partial report.

Dr. Brodie moved that it be accepted and adopted.

Carried.

The Secretary stated that he had a charge made by Dr. Eugene Smith against a member of the Society, which he moved be referred to the Judicial Council.

Dr. Topping supported the motion, which was carried.

Dr. Breakey, Chairman of the Committee on Necrology, read his report in full, prefacing the same by the following remarks:

"Your Committee on Necrology are very happy to report but a few members as having died within the past year. They have the names of J. H. Beach, of Coldwater; Dwight Nims, of Jackson; and Z. E. Bliss, of Grand Rapids, who died three or four years ago, whose name has never been reported. The facts for a biographical sketch of Dr. Bliss' life were not furnished to the committee in time last year to report.

"I have also the name of Dr. Nathan Mitchell, of Coldwater. Dr. Mitchell was a member of the Society, but at present his name is not upon the roll. Dr. Twiss, who furnishes the facts in the case of Dr. Mitchell, reports that he was only prevented by age from attendance for the last year or two; and in view of the fact of his being a pioneer in the profession in Michigan, and a very worthy man, the committee have reported his name, leaving it for the Society to determine whether it shall go upon the roll or not.

The facts in the case are reported by Dr. Twiss, and the facts in the case of Dr. Beech by the Doctor, together with Mrs. Beech; and Dr. Bliss by his wife, Mrs. Bliss; and in the case of Dr. Nims, by Dr. Cyrus Smith, of Jackson, a member of the committee, and by Dr. Nim's family.

After the reading of the obituary of Dr. Beech, Dr. Jerome, of Saginaw City, moved that it be accepted and adopted, with thanks.

Carried.

After reading the memoriam of Dr. Nims, Dr. Topping moved that the report of the committee be accepted and referred to the Committee on Publications.

Carried.

After reading of report of the life and death of Dr. Bliss, Dr. Topping moved that it be accepted and referred to the Committee on Publications.

Carried.

Dr. Breakey then read the report of Dr. Nathan Mitchell.

Dr. Topping moved its acceptance and reference to the Committee on Publication.

Carried.

Dr. Ranney announced that Dr. Baker, Secretary of the State Board of Health, was unable to be present, but he had sent his annual report here for distribution to the members, in charge of a gentleman from Lansing, and they could be had by calling on him at the other end of the room.

Dr. Pratt, Chairman of the Finance Committee, made the following report:

To the Michigan State Medical Society:

Your Standing Committee on Finance, having examined the reports of your Secretary and Treasurer, and their books and vouchers, beg leave to report that, as shown by the report of the Secretary, the resources of the Society during the year last past have been as follows:

From fees		$184 00
" dues		320 00
" other sources		13 00
Total receipts		$517 00
Of this amount, paid to Treasurer	$474 00	
Paid by Secretary for sundries	53 50	
		527 50
Leaves due the Secretary		$10 50
The report of the Treasurer acknowledges the receipt from the Secretary of		$474 00
From former Treasurer		159 66
From interest on deposits		10 56
Total receipts		$644 22
His disbursements, as shown by his report, and verified by vouchers have been	$463 10	
Leaving a balance in his hands belonging to the Society of	$182 12	
		$644 22

From the $181 12 (reported by the Treasurer as deposited to the credit of this Society in the Central Michigan Savings Bank at Lansing), if we deduct $10 50, reported to be due the Secretary, the available money on hand at the close of the year and belonging to the Society is $170 62.

All of which is respectfully submitted.

FOSTER PRATT.
J. H. JEROME.
MOSES PORTER.
H. TUPPER.
W. BROWNELL.

On motion of Dr. Brodie, the report of the Finance Committee was accepted and adopted.

The next in order was a paper by Dr. Hitchcock, entitled "A case of Fracture of the Acetabulum, with Dislocation of the Femur."

Dr. Brodie moved that the regular order be suspended, and that the next paper in order be taken up, as Dr. Dunster, who was to read Dr. Hitchcock's paper, had not arrived.

Carried.

The Secretary stated that Dr. Wyman had a voluntary paper on the "Dangers of the Introduction of Air into the Veins by the use of the Aspirator."

On motion, the paper was received.

The next in order was a paper by Dr. J. S. Calkins, entitled "Hour-Glass Contraction of the Uterus."

Dr. Caulkins said that in consequence of his experience as a listener, he was satisfied that he could not be heard in the room, and therefore declined to read his paper himself, but said his friend and neighbor, Dr. McCall, of Lapeer, would read for him.

The paper was then read by Dr. Calkins.

Dr. Topping moved that the paper be received and referred to the Publishing Committee.

Carried.

Dr. Bennett, of Coldwater, said: That question is a very interesting one, and as it is a fact that I have happened to discover a few cases of hour-glass contraction of the uterus, I have a few words to say on that subject.

The speaker was here interrupted by Dr. Brodie, who said: "There is in the room Dr. Leonard Chase, who graduated in the year 1821, from Vermont; I move that he be invited to a seat on the platform."

Motion carried, and the visitor escorted to a seat amid applause. The President introduced him formally to the members of the Society as a practicing physician of 58 years' experience.

Dr. Bennett continued: Gentlemen of the Association, it was hardly necessary for me to take the stand for the purpose of saying the brief words I was going to say. The paper, as I suggested, was interesting to me, as I had happened to meet a few cases of hour-glass contraction of the uterus. The question of the circular fibres, whether there are or are not, is a question I am not able to discuss, as an anatomical proposition; but the facts are, that the contraction of the uterus in hour-glass contraction does not always take place so low, in my judgment, as to be out of reach of the circular fibres as they are declared to exist. Now, within the brief period of four years, I have struck, luckily or unluckily for me, two cases of hour-glass contraction of the uterus wherein the placenta was retained and grasped in the contraction, and was, as stated by the author of the paper, such as to grasp the placenta, not to exclude it, in the upper portion directly in the fundus of the uterus, but to grasp the placenta so that it divided the placenta into two parts, the lower and the upper half, and the contraction involved the placenta about as I have it drafted there—[showing diagram.] Now, in one of those cases I had a pupil with me. The patient was rather an idiotic girl or woman about thirty, in our county-house. I was called there to attend her, and sent my pupil. He said there was trouble afoot; he couldn't get the placenta. He sent for me, and I went up there about an hour after the delivery of the fœtus. He said the thing stuck; he couldn't get it out. [Laughter.] Consequently I went up there, and supposing we had got a placenta retained from the ordinary cause, I came pretty near making a blunder. I passed my hand up in the usual manner, supposing I had gone around the placenta. I commenced pushing off, but directly I found I was cutting it in two. I found the hour-glass contraction of that character I had to go around to get over the sections.

I brought my placenta home and exhibited it to members of the profession in the city. Both cases I have spoken of have been of that character. Now that, gentlemen, is all I wish to say on the subject. There is a diagram which represents it very fairly. I have drafted it sitting in my seat. How a contraction can occur there without the circular fibres I am not able to state; but as certainly as twice two are four there was contraction. [Applause.]

The motion that the paper be referred to the Publishing Committee was carried.

Prof. Donald McLean then read his paper entitled "Clinical Notes on Ovariotomy."

Dr. Jerome moved that the paper be referred to the Committee on Publication.

Carried.

Dr. Alvord—I want to draw attention for a moment only, to the fourth case, I think, of Prof. McLean's, the case he operated on for me; and it is only because it is that class of patients that is commonly left to die that I speak of it at all. At the meeting of the State Medical Society at Battle Creek, two years ago, I asked the opinion of Dr. Pratt, of Kalamazoo, having formerly had the opinion of Prof. Palmer, Dr. Brodie, and of two or three other prominent physicians in the State, describing this case as carefully as I could, as to the propriety of an operation for ovariotomy. Being one of those malignant cases, every one discouraged the operation. The only encouragement I got at all was from Prof. Dunster, and he thought it would be rather doubtful—the propriety of the operation. But after having seen the breasts carefully removed and the excellent recovery that she made, I felt certain, knowing the woman's family history for some time, that although there was this malignant disease at work, and although there was procidentia of a year's standing—constant, I mean, with the uterus externally measuring between six and seven inches, the cavity measuring five and a-half inches, and although she was but little more than a skeleton, there was strong hope. I felt that it was a very possible thing that she might make a recovery. With this view I asked Dr. McLean to come. He came and saw the case, and felt, taking everything into consideration, that there was a strong possibility, if not a fair probability for her recovery. In a few days after the operation was made the procidentia was reduced, that is, within the first two weeks. Now, without any further treatment towards the uterus, the uterus is of normal size. She menstruates, and has since about the second month, regularly. At that time, with an ovarian tumor which weighed about thirty pounds, her entire weight was less than eighty pounds; now she weighs one hundred and sixty-five pounds. Since then I have removed ten malignant growths from the breast and axilla. She has never exhibited any cachectic appearance.

Dr. Pratt—How recently was the removal of the last?

Dr. Alvord—Week before last. She has never exhibited any cachectic appearance whatever, and has been, since the second month after the removal of the ovarian tumor, which was about two years ago, doing her own work for a family of six children, and as healthy as anybody else. The reason why I draw your attention to it is simply that it be a plea that those

women who seem to have gone so very far that there is not much use of treating them, that they have, if it seems at all possible to save them, a fair chance by the removal of the ovarian tumor.

The Committee on Admissions then reported favorably upon the application of a number of physicians, who were declared elected by a vote of the Society.

Dr. Briggs, Chairman of the Committee, then read the following:

In the matter of charges, made by Dr. C. V. Beebe against W. L. Wells, for which his (Well's) application to membership in this Association was, at the last meeting, postponed to this time, we find that the Livingstone County Medical Society, after full examination, exonorated him (the said Wells) from all the charges and specifications. And while we find that there might have been some irregularities in the use of a certain cancer powder, we think it was continued and made the cause of a professional and personal quarrel between the above named parties, which is, in our opinion, reprehensible, and should be discountenanced.

And in consideration of the fact that Dr. Wells has discontinued the irregularities, made known the formula, and revealed the "valuable secret" which he intended to hold while he lived, and promises in the future in all things professional to be regular, we would recommend that he, the said Wells, be admitted to membership.

THOS. H. BRIGGS,
S. S. FRENCH.
D. C. SPAULDING.
E. TWISS.

Dr. Pratt moved that the report be referred to the Judicial Council.

Dr. A. B. Palmer, of the University of Michigan, said: It seems to me that the Committee has established the precedent of not going behind the action of local societies. In one case here yesterday of some one who was refused admission to the Detroit Medical Society, without any investigation the candidate was rejected. This seemed to establish the precedent of going according to the decisions of the local societies. Now, let us follow that precedent. I think it a proper one, for we cannot be engaged here with all these minute discussions. If the local society who has examined the case have exonerated him, it seems to me that we should not go back of that. I therefore move that the last resolution which was offered be laid on the table.

Dr. Foster Pratt—I hold, Mr. President, that in our State organization it should be the unvarying rule not to receive as members here those who are rejected by the local societies; but I do not believe that the converse of that proposition is just, wise or politic. I do not understand, sir, that we are under

any obligations, or that it may always be wise to receive every one that may be acquitted upon charges by a local society, or every one that may be received by a local society. Now, this is a question which properly belongs to the Judicial Council, and I don't propose to express any opinion about it here. It is a matter which, as I think, should have been referred to the Judicial Council by the Committee on Admissions, and it is because I want the action of the Judicial Council upon it that I moved to refer it there. If the Judicial Council shall concur in its recommendation with the Committee on Admissions, we then have nothing further to say about it.

Dr. Shank—Will you allow me to ask the Doctor what is his object in referring this matter to the Judicial Council?

Dr. Pratt—I am stating it: To have from that council a decision upon any ethical question that may be involved in it, if there is any, and not to create a precedent for discussion of such questions here in this body upon the report of the Committee on Admissions. In the American Medical Association, when charges are made or objections made to persons applying for membership, the objection goes at once to the Judicial Council. The Committee on Admissions have nothing to do with it, and, for one, I don't wish to see such questions come here. We have erected, so to speak, a tomb of the Capulets, into which all those things can be consigned to oblivion, except so far as it chooses to give up, in part, what is committed to its trust. I am in favor of keeping all these questions out of this Society. I think these questions, when raised, should be referred to the Judicial Council, and I move it more for the sake of a precedent than because I have any judgment to express about the merits of the case involved.

Dr. Mulheron—It seems to me that this case has come to a vote of the Society without any protest against the action of the Society, and the decision of that local society should be final, so far as this State Society is concerned. If there is any protest here against the action of the Society in acquitting Dr. Wells, it would then be time for the Society to take action.

Dr. Beebe—I wish to say, as the person who preferred those charges, that there was a protest offered, and I wish to say further that I have had no chance or opportunity to show this matter up as I might before the Judicial Council. There are other charges to be brought against this man.

Dr. Pratt—I merely wish to add to what I have already said, that the constitution reads like this: "All questions of a personal character, including complaints and protests, all questions on credentials shall be referred at once, after the report

of the Committee on Admissions or other presentation, to the Judicial Council, and without discussion." [Applause.]

The Chair—This will be so referred without discussion, it being a constitutional provision.

Dr. Hitchcock's paper upon "A case of Fracture of the Acetabulum, with Dislocation of the Femur," the reading of which had been by resolution deferred beyond the time mentioned in the printed order of business, as reported by the Chairman of the Executive Committee and adopted by the Society, was then called up. By request of its author, the paper was read by Prof. Dunster, of the University.

As the reading developed the fact that the paper contained personal reflections derogatory to several members of the Society, the further reading thereof was objected to. The reading was continued, however, until recess, when at 12.30 the Society adjourned.

Afternoon Session.

The Society convened at 2.30 P. M., and was called to order by Vice President Whelan.

Calling of the roll and reading of the minutes were dispensed with.

The Secretary stated that if any members had come in who were not present at a previous roll call, and would report their names to him, he would indicate their presence by checking their names on the roll.

Dr. Topping moved that the Society take up the fourth order of business, viz.: the election of officers.

Carried.

Dr. Brodie moved that a committee of five be appointed by the Chair, to nominate all the officers of the Society except President.

Carried.

The Secretary read the following:

In behalf of the Grand Rapids Medical Society, I invite the Michigan State Medical Society to hold its next annual meeting at Grand Rapids.

(Signed) CHARLES SHEPARD.

On motion of Dr. Brodie, the invitation was accepted.

Dr. Brodie.—It is well known that the American Medical Association has adjourned to meet in June next, in the city of New York, and that this Society, when it adjourns, will adjourn until May next; I therefore move that the nomination of the delegates to the American Medical Association be deferred until next year.

Carried.

Vice President Whelan then announced the following committee on nomination of officers: Drs. Jerome, Kinne, Shank, Klein and Twiss.

Dr. Pratt then offered the following:

Resolved, That the thanks of this State Medical Society be and they are hereby cordially tendered to Park, Davis & Co., to the Board of Water Commissioners, to the Inspectors of the House of Correction, to the Commissioners of the Detroit Fire Department, to the Committee of Detroit Public Library, to the Detroit Medical and Library Association, and to the physicians and citizens of Detroit, for invitations, for hospitalities, and courtesies; and to Park, Davis & Co. for their steamboat excursion, by which the members of this Society, their ladies and friends, were enabled to visit the chemical manufactory of the firm and the Detroit Water Works.

Carried.

Dr. Topping moved that the Society proceed to the election of President for the ensuing year by ballot.

Carried.

Dr. Brodie moved that the ballot be informal.

Carried.

Dr. Hitchcock nominated Dr. Whelan, of Hillsdale, as candidate for President, stating that the southern tier of counties had had no President at all.

Dr. Topping nominated Dr. Johnson, of Grand Rapids, as one who had been for years past a working member of the organization.

Dr. Cook nominated Dr. Shank, of Lansing.

Dr. Shank said: I hear my name mentioned as a candidate. I wish to inform my friends, that while I am thankful for the nomination, I am not a candidate.

Dr. Topping suggested that the Chair appoint tellers, and President Cox appointed Drs. Pratt and Palmer as such.

The ballot was then taken, with the following result:

Dr. Geo. K. Johnson, of Grand Rapids, received	68	votes.
Dr. A. F. Whelan, of Hillsdale, received	26	"
Scattering	7	"
	101	

On motion of Dr. Whelan, the vote was declared formal, and Dr. Johnson unanimously elected.

The President said there were three members of the Judicial Council to be elected in place of Drs. Brodie, Southworth, and Owen, whose terms of office had expired.

The President stated that the committee ordered appointed yesterday on the President's address would consist of Drs. Pratt, Shepard, French, Klein, and Brown of Monroe.

Dr. Brodie moved that the Society proceed to ballot for one member of the Judicial Council.

Dr. Dunster nominated Dr. Shank, of Lansing, as one of the Council.

Dr. Carstens nominated Dr. Eugene Smith, of Detroit.

Dr. Smith declined in favor of Dr. Shank.

Dr. Topping nominated Prof. McGraw.

Dr. Pratt read the names of those whose terms of office expire this year, and stated that in consequence of the election of Dr. Johnson to the office of President, his place would have to be supplied, and that a vacancy had been created by the death of Dr. Nims, making in all five vacancies to fill.

Dr. Hitchcock nominated Dr. Brodie to fill his own vacancy.

Dr. Beebe nominated Dr. Topping, of DeWitt.

During the balloting, Dr. Brodie, as Chairman of the Committee of Medical Examiners, made his report as follows:

REPORT OF THE MEDICAL EXAMINERS SELECTED BY THE REGENTS OF THE UNIVERSITY FOR THE YEAR 1879.

In the autumn of 1878 the undersigned received a notice from the President that the Regents of the University had invited us to act, in conjunction with the Faculty of the Medical Department, in the examination of the candidates for graduation in that Department for the year 1879.

Gratified that such a step had been taken, so in accordance with the repeatedly expressed wishes of this Society, "that the Profession should be the guardian of the gates of entrance to its ranks," we thought it our duty to, and therefore did, at once, accept the invitation.

Receiving notice from the Dean of the Medical Faculty that there would *this year* be an examination of candidates for graduation in March, for those who began their course of study under the old regime, *i. e.*, before the course of lectures was extended to nine months, we went to Ann Arbor two or three days before the close of the spring term and took part with the Medical Faculty in the examination of 37 candidates.

The Faculty told us that it had been determined by them, with a committee of the Regents, that our position in the examinations should be the same as that of any member of the Faculty, and that in voting upon the several candidates, each one of the examiners should also have a similar influence. The Faculty very cordially extended to us the utmost freedom to conduct the examination as we chose.

It appeared to us that a written examination upon topics involving those points in anatomy, pathology, and materia medica most frequently met with in every day practice, and, therefore, the most important to be thoroughly understood, would be the best manner of testing the fitness of a young man or woman for the responsible duties of a physician.

As the arrangements had not until then been perfected, we contented ourselves with presenting a few topics, which were written upon by the several candidates, and spending a short time in an oral examination. This written and oral examination forms the basis for our votes upon the several candidates.

The Medical Faculty had previously examined the candidates upon didactic medicine in its various branches, and upon this examination, together with their daily observation of the students during the lecture terms, the Faculty based their votes upon the several candidates.

The final result, in the very uniform agreement of the votes of the examiners and members of the Faculty, demonstrated that a faithful, attentive student during lecture terms would be able at their close to give a favorable account of his work and his qualifications in writing upon practical topics pertaining to his profession.

For the regular June examination we have prepared six topics, upon each of the following general subjects, viz.: Anatomy, Chemistry, Materia Medica, Obstetrics and Diseases of Women, Practice of Medicine and Surgery, and Surgical Anatomy. The following are the topics:

Anatomy.

Topic First.—Describe the stomach. Its anatomy. Its relation to other viscera. Its functions. How digestion is performed. Trace the product into the blood. Give brief statement of the Anatomy and Physiology of the digestive apparatus from the beginning to the end.

Topic Second.—Describe the Liver. Its anatomy. Its relation to other organs. The process of depuration the blood undergoes. The product and its uses.

Topic Third.—Describe the Kidneys. Their anatomy. Where situated. Their functions and how performed. What are their appendages and uses, if any.

Topic Fourth.—Describe the Uterus and appendages. Its anatomical relations. The changes the organ undergoes from conception.

Topic Fifth.—Describe the regions of the Abdominal Cavity and their contents.

Topic Sixth.—Give the anatomy of the Peritoneum and Pleura. Their functions and the diseases to which they are subject. Give brief statement of symptoms.

Surgery and Surgical Anatomy.

Topic First.—Fractures of the long bones. Varieties. Characteristics of each. Prognosis. What in their treatment is essential to be secured and maintained? How would you do it? Initial bandage—when to be used—its benefits and its dangers.

Topic Second.—Dislocations of the Upper Extremity: of the shoulder, elbow, wrist. Varieties—characteristic signs of each. Method of reduction. What anatomical structures are involved in dislocations?

Topic Third.—Wounds of the head. Scalp. Their danger. Treat-

ment. Fractures of cranium—special dangers of. Treatment. When would trephining be indicated? Concussion and compression of brain. Symptoms and significance of each. The proper treatment for each.

Topic Fourth.—Boils, carbuncles and abscesses. Characteristics of each. Causes. Significance and danger. Treatment: surgical and medical, local and constitutional.

Topic Fifth.—Tell where to cut and by what guides for ligating carotid artery; brachial; radial; anterior and posterior tibials. When and where do the two ends of a divided artery require to be ligated?

Topic Sixth.—Injuries to the Upper and Lower Extremities. What anatomical parts are involved in a crushed hand or foot? Treatment of a crushed hand or foot. Under what conditions would amputation of a crushed finger or toe or the whole hand or foot be required? At what point would you amputate a finger or toe to make the most shapely and useful member? What should be the aim of the surgeon in amputations of the extremities?

Practice of Medicine.

Topic First.—Fevers. Give in general the etiology and characteristic symptoms of an intermittent, a remittent, a typho-malarial and a typhoid fever. Briefly indicate the treatment for each. What abdominal organs are specially involved in each?

Topic Second.—Diseases of the lungs. Give the symptoms and rational signs of Pneumonia, Pleurisy, Bronchitis and Tuberculosis in the 2d and 3d stages. Indicate in general the appropriate treatment for each.

Topic Third.—Diseases of Abdominal Organs. Give the constitutional symptoms and signs of Colic, Gastritis, Diarrhoea, Dysentery and Peritonitis. Give the proper treatment in general for each.

Topic Fourth.—Give the prodomata and symptoms of Scarlet Fever. Measles and Small Pox. Are either of these diseases contagious? How would you treat a case of each for its own sake and also to prevent the spread of the disease?

Topic Fifth.—Describe Stomatitis, Tonsilitis, Diphtheria and Membranous Croup. Point out the resemblances and the differences of the last mentioned two. Treatment for each.

Topic Sixth.—Diseases of the Brain and its membranes. Tuberculous Meningitis. Course and symptoms. Treatment. Prognosis. Cerebro-Spinal Meningitis. Etiology. Treatment. Prognosis. Sequelæ.

Materia Medica.

Topic First.—Give the leading preparations of Mercury for medical uses. Their physiological effect. When indicated. Uses; doses. Which are poisons and their antidotes.

Topic Second.—Arsenic and its pharmaceutical preparations. Its physiological effect. Uses. Properties. In poisonous doses the antidote. For what disease is it almost specific.

Topic Third.—Ipecacuanha. From whence obtained. Physiological effect. Uses. Doses. When indicated. Officinal preparations.

Topic Fourth.—Describe Opium. Where and how obtained. What are its principal salts and officinal preparations. Their doses and uses. Their effect on the system. Antidote for poisonous doses.

Topic Fifth.—Cinchona Bark. Where obtained. Its properties—principal varieties. Its alkaloids and officinal preparations. Their doses and uses.

Topic Sixth.—Give the principal Emetics and the diseases for which their use is indicated. Sedatives—what are the principal ones, and their preparations, doses, and the indications for their use.

Chemistry and Chemical Analysis.

Topic First.—The chemical history of Potassium. Name six of its compounds used in medicine, and state their exact composition, giving chemical signs. Give their classification in medicine.

Topic Second.—Chemical analysis of Normal Urine. What are the sources of its various constituents? Give several chemical and microscopical abnormalities of urine, and state significance.

Topic Third.—The Foods essential to the healthy development and maintenance of the human body. Their chemical composition. Why are these foods essential?

Topic Fourth.—Tests and antidotes for Poisons, Strychnia, Opium and its derivatives, and other narcotics. Give the symptoms of poisoning by them.

Topic Fifth.—The Alcohols. How many are there, and how do they vary in composition? Do alcohols contain the elements essential for foods? What elements are absent? State the relations of the ethers to chloroform, chemically, and the relation of chloroform to chloral hydrate.

Topic Sixth.—Air and Water, and their impurities. Give in chemical terms the composition of potable water and pure air. State the per cent of carbonic acid in air that makes it unfit for respiration. Give in general the sources of the carbonic acid gas in the air. What are some of the impurities liable to contaminate drinking water, and how may they be detected? How avoided?

Obstetrics and Diseases of Women.

Topic First.—Describe the Corpus Luteum—where situated—how produced. Give the Diagnosis between the Corpus Luteum of Pregnancy and that of Menstruation. What is its value in Criminal Abortion. Give Physiology of the Ovary. Menstruation and its diseases.

Topic Second.—Describe Endometritis, causes, symptoms, diagnosis, prognosis, and treatment. What are some other diseases to which lying-in-women are liable?

Topic Third.—Describe Puerperal Peritonitis—its causes, symptoms, diagnosis, prognosis and treatment. Does erysipelas enter as a factor in this disease?

Topic Fourth.—Define Abortion. The principal causes that produce it. How it can be prevented. Under what circumstances should it be produced and the mode of procedure. What are the dangers arising from it to the mother?

Topic Fifth.—Define the Forceps. Under what circumstances should they be used. What are the dangers from their use. How should they be applied. Under what circumstances or conditions is chloroform indicated? Relate some of the complications of labor.

Topic Sixth.—Give the management of the mother after labor is completed; also the child, after its expulsion. The same of the placenta. Give treatment of post-partum hemorrhage.

These topics have been already written upon by the candidates, each candidate selecting three topics from each general subject, and upon the written answers to these topics will the vote of the examiners upon the several candidates be based.

We congratulate the Profession of the State upon the fact that the Profession itself has thus far been put in the natural and rightful position of determining who shall be admitted to its ranks.

WM. BRODIE,
H. O. HITCHCOCK.
Committee.

Dr. Whelan moved that the report be accepted and ordered printed in the minutes.

Carried.

Dr. Pratt announced the result of the first ballot for members of the Judicial Council as follows:

Whole number of votes cast, 91; of which Dr. Brodie received 57; Dr. McGraw, 20; Dr. Topping, 8; scattering, 6.

On motion of Dr. Jerome, Dr. Brodie was declared unanimously elected.

Another ballot was ordered for the second member of the Judicial Council.

Dr. J. A. Brown, of Detroit, was first nominated.

Dr. Dunster, of Ann Arbor, was next nominated, and respectfully declined.

Dr. Bennett nominated Dr. Southworth, as a southern tier county man, to be his own successor.

Dr. McLean nominated Dr. Bennett as a southern tier county man, and as Dr. Southworth's successor.

Dr. Dunster said he had a little matter of business which was not strictly in order, but as it would take but a moment he would move to suspend the order of business in order to allow the introduction of the new business; it related to the amendment to the by-laws, and he moved that the amendment be taken from the table and put upon its passage.

Carried.

The following is section two, article four, of the by-laws, as it now reads:

"Every member, on admission, shall pay the sum of two dollars initiation fee, and sign the constitution and by-laws; nor shall he be entitled to the rights of membership until the same is done."

The amendment is to add to this as follows:

"In case, however, these requirements be not complied with in two years from date of election, such election shall be null and void."

Dr. Dunster moved that the amendment be adopted.

Dr. Jerome:—If we are to allow a man to remain here two years as a member of this Society without paying anything, we are taking a long step towards bankruptcy. I hope this

amendment will not prevail. It is a very injudicious amendment for this Society to adopt; we render ourselves entirely unable to command the funds to which this Society is entitled to carry on its every day and every year business by this process.

Dr. Jerome moved, as a substitute, the amendment proposed last year by the Committee on Admissions, as found on page 220, Transactions for 1878, which reads as follows:

"Every member on admission, and before the close of the session at which he was admitted, shall pay the sum of two dollars as an initiation fee, and sign the constitution and by-laws; nor shall he be entitled to the rights of membership until the same is done."

Dr. Dunster said that as this action of the committee had been adopted by the Society, it barred further action in regard to his amendment, and he hence begged leave to withdraw it, as the report of the committee fixed the matter so plain and distinct that there could be no misunderstanding it in the future.

The report of the second ballot was then announced as follows:

Dr. J. A. Brown, of Detroit, received	44	votes.
Dr. Bennett, of Coldwater, received	32	"
Dr, Southworth, of Monroe, received	10	"
Dr. Topping, of DeWitt, received	7	"
Scattering	10	"
Total	103	

No choice.

Dr. Carstens moved that Dr. Brown be declared the unanimous choice of the Society by acclamation.

Dr. McLean, of Ann Arbor, moved that Dr. Bennett be declared unanimously elected.

The Chair ruled both motions out of order, and instructed the Society to proceed with another ballot.

Dr. Brodie, as one of the Council elected last year by this Society to act as counsel to defend this Society against charges pending in the American Medical Association, then read the report of the committee.

Dr. Jerome—We were laboring under a little mistake as to the amendment proposed by the committee as having been adopted. The vote, of course, was entirely satisfactory and unanimous, or nearly so; but it requires that it shall be formally adopted. This was a recommendation by the committee last year, that is, the amendment which I read in your hearing. It was simply an amendment recommended by the com-

mittee and accepted by the Society, but had to lay over under the rules for one year. I therefore now move its adoption.

Supported by Dr. Brodie; also by Dr. Dunster, who said it would settle the matter for all time to come.

Motion carried.

Dr. Brodie said he noticed the error his friend Jerome had fallen into, but was waiting for him to discover it.

Dr. Jerome said: I never before, in all my life, knew my friend Brodie to be so patient. [Laughter.]

Dr. Pratt then announced the result of the ballot just taken as follows: Whole number, 102; Dr. Brown, 49; Dr. Bennett, 45; scattering, 8.

Dr. Carstens renewed his motion to declare Dr. Brown unanimously elected, and claimed that it was perfectly parliamentary unless objection was made to it, in which case a ballot would have to be taken.

Dr. McLean said that Dr. Bennett belonged to the southern tier of counties, and they were entitled to a representation.

Dr. Palmer said the Society could elect them both, and moved that both of them be elected.

Dr. Jerome supported the motion.

The President said he thought he saw a way out of it, viz., to allow the Secretary to cast the ballot for Drs. Brown and Bennett.

Dr. Palmer moved that the Secretary be instructed by the Society to cast the ballot for those two men.

Motion carried and ballots cast by the Secretary for Drs. Brown and Bennett, who thereupon were declared unanimously elected.

Dr. Brodie nominated Dr. Pratt to fill one of the remaining vacancies.

Dr. Brodie nominated Dr. McLean.

Dr. Jerome nominated Dr. Tupper, of Bay City, as that part of the State had no representative.

Dr. Jerome moved that the Secretary be instructed to cast a ballot for Dr. Tupper.

Dr. Brodie said he wished to object to that, because it was not on "the square." He had nominated Dr. McLean.

Dr. Jerome said that the members were all within a radius of forty miles; he wanted them scattered a little.

The motion to cast a ballot for Dr. Tupper was lost.

Dr. McLean said he wished to nominate Dr. Shank, and would withdraw in his favor.

Dr. Jerome said the Doctor was coming up for something else on the list of nominations.

Dr. Brodie moved a vote of thanks to Dr. Baker for furnishing the transactions of the State Board of Health to the members present.

Carried.

Dr. Brodie moved a vote of thanks to Messrs. McMillan & Co. for furnishing so liberal a supply of mineral waters to the members in attendance.

Carried.

Dr. French.—Our Secretary works hard to keep up the interest of the Association, and, as its Secretary, furnishes the transactions promptly and in good order, and I move you that the usual honorarium of one hundred dollars be voted the Secretary.

Dr. Jerome—I support the motion; and in further explanation, it may not be known to the members of this Society—I think it is not generally known that he has provided a shorthand reporter, at his own cost, to take down what is said or done here *verbatim*. He has done that at his own cost for the two years past, and is, therefore, entitled more to our gratitude for having so done.

Dr. Brodie—I don't think it is generally known—for I think if it had been the members would have been a little more careful in what they had to say. I mean Dr. Jerome in particular. [Laughter.]

Motion carried.

Dr. Eugene Smith moved a vote of thanks to Miss Jennie Brodie for her kind thoughtfulness in providing the Speaker's desk with a beautiful bouquet.

The motion was put by Dr. Jerome and carried.

Dr. Pratt announced as the result of the ballot 102 votes, of which Dr. Shank received 49, and Dr. Tupper 46; scattering, 7.

Dr. McLean moved that the Secretary be allowed to cast the vote for Dr. Shank.

Lost.

The result of the next ballot was 106 votes: Shank, 62; Tupper, 44. Dr. Shank was declared elected.

The Committee on nominations made the following report:

For First Vice President—Dr. J. R. Thomas, of Bay City.
For Second Vice President—Dr. H. B. Shank, of Lansing.
For Third Vice President—Dr. Wm. F. Breakey, of Ann Arbor.
For Fourth Vice President—Dr. E. S. Snow, of Dearborn.
For Treasurer—Dr. George W. Topping, of DeWitt.

Dr. Brodie moved that the report be accepted.

Dr. Jerome, in calling attention to his remarks a moment ago relative to Dr. Shank, said that, as he understood it,

there was nothing inconsistent in his filling the two positions.

Dr. Shank said that if the report was accepted he would offer an amendment to strike out the name of H. B. Shank and insert that of D. O. Farrand of Detroit.

Dr. Brodie supported the motion.

Dr. Cox—The report is not yet accepted; perhaps it can be changed before it is accepted.

A motion that the report be accepted was carried.

Dr. Shank asked for a vote on the motion to insert the name of D. O. Farrand in place of his.

The motion was then put and carried.

Dr. Brodie now moved the adoption of the report of the Committee on Nominations.

Carried.

Dr. Brodie moved to proceed to the regular order of business.

Carried.

The President said that Dr. Dunster would proceed to read the balance of Dr. Hitchcock's paper.

Dr. Jerome asked what other papers there were to be read, and what other business there was on hand.

The President said there were several other papers, and enumerated some of them.

Dr. Jerome said: "I would move you, sir, in view of the lateness of the hour, and the fact that there has been no opportunity to read these papers, that the further reading of Dr. Hitchcock's paper be postponed."

Dr. Brodie said he had no objections if the gentleman would accept as an amendment, "and printed."

Dr. Jerome objected, on the ground that it would cost too much, and for other reasons.

Dr. Hitchcock said the balance of the paper would require but fifteen or twenty minutes.

Dr. Jerome's motion was here put and lost.

Dr. Jerome moved that those who had papers there and who were intending to leave the city before an opportunity could be given to read them, be requested to file them with the Secretary.

Carried.

Dr. McLean moved that the Society hold an evening session.

Dr. Jerome objected, on the ground that two-thirds of the members, in all probability, would return to their homes on the earliest trains, and it would not be right to leave the Society in the hands of the few who might chance to remain.

Dr. Eugene Smith suggested that as Dr. Dunster was such a good reader, it might be well to leave the papers in his hands, to be read by him. [Laughter.]

Dr. Dunster said he had a very heavy contract on his hands already.

A motion to hold an evening session was lost, and the motion to read the balance of Dr. Hitchcock's paper was carried.

Prof. Palmer, of the University, then offered the following:

Resolved, That the paper of Dr. Hitchcock, as it contains strictures upon the conduct of members of this Society, be referred to the Judicial Council, and that the members of the Society interested have the privilege of appearing before the Council and of presenting any counter statements they may choose, and that said Council may order the publication of the Transactions of the Society, of the paper of Dr. Hitchcock, and of such counter statements as may be presented, or any part of such papers as in their discretion they deem proper.

Dr. Carstens, of Detroit, called for a division of the question. The President stated that the vote would be taken, first, "on the reference of the paper to the Judicial Council." This was put and carried. The remainder of Prof. Palmer's resolution, after some discussion, was laid on the table.

Dr. Hitchcock then expressed his desire to withdraw the paper, and by a vote of the Society he was permitted to do so.

The following resolution was offered by Dr. DeWitt C. Wade:

Resolved, That this Society adopt the metric system of weights and measures, and recommend it to the physicians and pharmacists of this State; the writers of future papers should be governed accordingly, and that this resolution be made to apply to the forthcoming transactions by the Committee on Publication.

On motion, the resolution was put on the table for one year.

Dr. Stevenson—I move that our Secretary be requested to print 200 copies of the President's address in pamphlet form, separate from the Transactions.

Carried.

Dr. Brodie—I move that all those papers that have not been read before the Society, providing the writers are willing, be sent by the Secretary to the chairmen of the different sections to examine, and upon their approval, that they be printed.

The Secretary—The new committees are not yet appointed. It may delay the proceedings some time.

The motion was put and carried.

Dr. Brodie moved that the Society tender to the President thanks for the able manner in which he has presided over the Society for the past year, and at the present meeting.

Carried.

The President—Gentlemen of the Society:—One year ago I thanked you from the bottom of my heart for the honor you

conferred upon me in electing me to this honorable position. I then informed you that I expected I would often have to call upon you for your aid, your forbearance, and your coöperation. I probably have made some mistakes in my rulings, perhaps have made some to-day, but I have intended to do the best I could, according to the knowledge I had. I thank the members of the Society kindly for sustaining me as they have during the year, and particularly during the present session; and now, with the best of wishes for the Society, and for my successor, I am ready to vacate the chair. [Applause.]

Foster Pratt—I move that the Society do now adjourn, to meet in Grand Rapids on the second Wednesday of May next, at 10 o'clock A. M.

Motion carried, and the Society adjourned.

GEO. E. RANNEY,
Recording Secretary.

CRIMINAL ABORTION.

ADDRESS BY EDWARD COX, M. D., PRESIDENT OF THE STATE MEDICAL SOCIETY.

Ladies and Gentlemen of the Michigan State Medical Society:

The organic law of our institution declares that among the objects of the association are "the promotion of * social intercourse and good fellowship, the maintenance of union, harmony and good government among its members, thereby promoting the character, interests, honor and usefulness of the profession;" also, "the cultivation and advancement of medical science, of literature, and of the elevation of the standard of professional education." Thirteen years of successful labor have demonstrated the benefits derived from our association. It has performed its work well, work that has been useful, not only to its members, but to "the people of the State, and even humanity throughout the world."

Social intercourse has been promoted, physicians throughout the State have become personally acquainted, ideas and opinions discussed and criticised, and a healthy emulation has been produced, which never could have taken place except through this or a similar association. Long may it continue, and may it increase in wisdom, usefulness and honor.

Our code of ethics declares that "among the duties of the physician 'is to be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, hygiene and legal medicine.'" It therefore becomes our duty to take under consideration many of the vices and social evils from which society is suffering, prominent among which is the great vice of the age,

CRIMINAL ABORTION,

a crime which has increased so rapidly during the present gen-

*Not in Constitution. See Trans. '77, p. 155.

eration, in the most enlightened communities, that it has created surprise and alarm in all conscientious persons who are informed of the extent to which it is carried.

Believing the injury resulting from this practice is so great as to endanger our civilization is my apology for speaking on this subject on this occasion, for in the language of Dr. Muscroft, of Cincinnati (speaking of another evil which equally applies to this), I believe "the day has arrived when the shroud must be removed, when the public safety imperiously demands an investigation into the matter, when those who deem it a small wrong may see it in its real proportions and magnitude." "Hitherto, reticence has been the policy. This position has been held too long—it is false in principle and injurious in tendency." "In order to make any attempt to suppress or abate this crime, I deem it necessary to educate, as far as possible, the public to understand to what extent this evil is carried, and how alarmingly injurious it is to health, life and happiness."

The duty of our profession is to prevent as well as cure diseases. It therefore takes an active part in sanitary reform. It has improved the health of our homes, our villages and cities, prevented the spread of epidemics, and, to a great extent, has divested contagious diseases of their terrors.

"The same motives should interest us in abating and preventing this great evil," which is more destructive to the lives, health and happiness of the American people than small-pox, cholera, or yellow fever. Outside of our profession the people have only known of it as a crime which they believed was seldom committed.

No reform can be made without their assistance, and to obtain this they must be fully instructed as to its prevalence, magnitude and evil consequences. Dr. Gardner says a knowledge of the great danger and frequent death which so generally accompany this procedure will do more to stop the practice than any argument that can be offered.

It is not necessary to say much relative to the history of this practice, as it is well known to every student of medical jurisprudence. Suffice it to say, it was practiced by the ancient idolators, and by nearly all of the ancients except the Jews and early Christians. Our purpose is to speak of it as it now exists and has existed during the present generation, of its causes and evil consequences, and to make and invite suggestions for restraining and preventing its perpetration.

When we commenced the practice of the profession, in the year 1839, this vice was almost unknown and scarcely ever

practiced by married women. None but the unfortunate maiden or brazen courtezan were guilty of the crime. This is the testimony and experience of all physicians of that period. In our own practice we had attended more than one hundred midwifery cases before we met with one of abortion. It has since that time so greatly increased in frequency that in our twenty-seventh one hundred cases we met with eighteen cases of miscarriage, fourteen of which, we had evidence, were from criminal design; one was accidental, the other three unknown. Dr. Storer, of Boston, met with fifteen cases in less than six months, and these all, without exception, were married and respectable women, many of them of wealth and high social standing. The late Dr. Blatchford, of Troy, Dr. Gardner, of New York, and many others who have written on the subject, concur "that forty years ago it was scarcely known, of rare and secret occurrence, but now has become frequent and bold."

We have no means of ascertaining the precise prevalence and frequency of this practice. Vital statistics and statistics of crime can generally be obtained and compiled with a good degree of accuracy. Not so with criminal abortion. It is performed in secret, seldom reported to the government authorities, and if so, is treated as a mere peccadillo, is seldom prosecuted, and the guilty ones still less often convicted. Not one in a hundred cases appear in official reports, and many, very many are never known by physicians, and if the unfortunate woman dies from its effects, it is reported caused by enteritis, peritonitis, or something equally false and deceptive.

Every city, village and hamlet has its *specialist*, plying this homicidal vocation, who has sufficient patrons and friends, equally guilty with himself, and too often among the officers of the law, to hide his crime from publicity, and, in case of prosecution, to shield him from conviction. For these reasons the whole number of cases can never be known; it can only be estimated.

During the past year I have corresponded with more than one hundred physicians of this and other States, all general practitioners, living, a fair proportion of each, in cities, villages and rural districts, and to each have asked this question, to wit: What percentage of midwifery cases under your observation during the last five years have been abortions or premature births? to which only two replied, less than ten per cent. One replied, forty per cent; nearly all answered between ten and twenty per cent, the average being about sixteen per cent.

Dr. Baker, compiler of vital statistics for the State of Mich-

igan, estimated the births in the same for 1872 at 43,081. Calculating the number of miscarriages from the lowest estimate possible to make from the experience of my correspondents, ten per cent, and we have 4,308 as the number of cases for that year.

According to the census, the number of children in the United States for the year ending June 1st, 1870, under one year of age, was 1,110,047. The number of births for the same time cannot be estimated less than 1,210,522. Estimating that ten per cent of pregnancies terminate in abortion, we find a loss of 121,052 fœtal lives during that year.

A sacrifice of a thousand hecatombs of human lives cannot be accidental, and viewing it as a crime, we turn with loathing and horror from so disgusting a spectacle. These estimates were for the cases which come to the knowledge of physicians; a large per cent should be added for those more secretly performed and still more completely concealed, than those who call a physician after the crime is perpetrated. Should the whole truth be known, we fear the number would double our estimate.

Occasionally we come to the knowledge of these modern Neros, whose business has been secretly carried on for a long time, and we are astonished at the frequency and atrocity of their crimes. In Detroit, not long ago, on his death bed, one of these wretches, suffering from remorse, acknowledged that during the last twenty years he had committed this crime 2,500 times.

We can never learn precisely the percentage of cases caused by design. The observations of my correspondents vary from forty to ninety per cent; very few say less than fifty per cent. The average is about seventy per cent, which corresponds with my own observation. Calling it fifty per cent, we have annually in this State, under the observations of the profession, 2,154 criminal cases, and in the United States, 60,526; and if the cases unknown to the profession could be brought to light, the number would undoubtedly be increased to 100,000.

The number of women who lose their lives is very great, but for reasons already assigned can never be known. In thirty-four cases reported by Tardieu, when the history was known, twenty-two were followed by death. This is a much larger per cent than generally reported by physicians.

Deaths from this cause, however, are much greater than the people believe. Our cemeteries are thickly dotted with the graves of its victims. A few years ago, on Decoration Day, in Oak Hill cemetery, I stood beside my friend Dr. French, who

with others was decorating the graves of soldiers. He informed me there were forty graves of soldiers in that cemetery. Turning around, he said, "Here are the graves of two women who died from criminal abortion," and added, "There are more such graves here than of soldiers." On comparing observations with others we became satisfied that his remarks were true. There were less than 3,000 graves in that cemetery; consequently, one and one-third per cent of the interments were from that cause. The cemetery had been occupied about thirty years.

The number of deaths in this State for 1872 was estimated at 21,071. If one per cent were from this cause. 210 women in this State, and more than 6,000 in the United States sacrificed their lives to this barbarous practice during that year.

This estimate may be considered exceedingly high, but let almost any physician look back over one hundred of his fatal cases, and he will be likely to find at least one victim of criminal abortion.

All physicians bear testimony that the health of the survivors is greatly injured. The practice produces inflammations of the various organs, ulcerations, prolapsus, abscesses, pelvic cellulitis, fistula malignant, and other diseases, which often afflict the patient through life. Furthermore, Dr. Gray, and others equally as well informed, teach us that these lesions produce reflex irritation of the brain, and directly and indirectly are often the cause of insanity.

Children subsequently born, being unwelcome guests of their unnatural parents, inherit the morose feelings and morbid conditions of their mothers, are feeble in body and mind, and consequently unable to wrestle successfully with the aims and objects of life.

A crime of such magnitude so often perpetrated, and with such evil results, not only to life and health, but to society, the State and civilization, calls for an investigation into its causes, and for the adoption of measures for restraining and preventing its perpetration.

A combination of circumstances has produced a depraved and debauched public sentiment that not only winks at but condones, palliates, and defends the crime. It goes further in many instances: it recognizes the abortionist as a useful member of society, and even extols him as a benefactor. It will take line upon line, and precept upon precept, facts, figures, and eloquence to overcome this false and pernicious sentiment. Yet it must be overcome before we can make the least progress in the much-needed reformation.

One of the principal causes of this sentiment is the common but erroneous belief that there is no life in the embryo previous to the fourth month of gestation, and believing there is no life destroyed, there is consequently no crime committed.

"This practice," says Dr. Gardner, "has nothing in it to astonish any one who does not know that the embryo is endowed with life, because that life is not yet observable." He says, in New York, abortions before quickening are of daily habit, in the families of the best informed and most religious, among the wealthy as well as the poor and needy. What is true in New York is equally true throughout the country. Women of good social position, entertaining this belief, apply with eloquence to their physicians for relief from the burdens of maternity. One claims poverty as an excuse, and cannot afford to raise a family; another has been married but a few months, and is not ready to commence housekeeping; poor health and the opinion said to have been expressed by her "old doctor," that she could not live through another labor, is deceptively given as an excuse by another, but the worst of all the shirks is she whose god is Fashion, of whom Pollock says:

> "The distaff, needle, all domestic cares,
> Religion, children, husband, home, were things
> She could not bear the thought of,
> Bitter drugs, that sickened her soul."

She will not forego the anticipated tour of Europe, a trip to Saratoga or Long Branch, nor even the pleasures of the gay season, but at the risk of

> "Health
> And peace, and an eternity of bliss,"

persists in her nefarious designs, claims to be a heroine. "She soothes her conscience by making the practice common and fashionable, as there is a fashion in this as in all other female customs, good or bad," becomes a propagandist, poisons the minds of her associates, and, as misery loves companionship, induces all she can to follow her example and become as selfish and unprincipled as herself.

Our laws have contributed to this morbid sentiment by not recognizing the embryo as endowed with life during the first half of gestation, and in most of the States is still imperfect in this respect. The press greatly aids this practice. It is subsidized by the manufacturer and vender of nostrums and by the abortionist himself, and, covertly or otherwise, brings to the notice of every family the means requisite to produce this crime. The druggist also stands prominent among those who

aid in its commission. He deals extensively in nostrums claimed to produce this end, he advertises in all the papers, his store is decorated with gilt-framed advertisements, he distributes "free almanacs" to his customers, the bill-boards and fences are covered with his immoral advertisements, and fearing the railway travelers will forget that he deals in articles that destroy the embryo of human life, he advertises this wicked traffic in mammoth letters upon the rocks of the hill-top and mountain side. Very few of these are efficient, but the mind becomes poisoned thereby, the individual becomes desperate, and perseveres until she succeeds in her undertaking.

Temperance reformers may truthfully speak of the traffic in intoxicating liquors, and of its great number of victims annually sacrificed, yet in our opinion it is no more destructive of the best interests of society than the traffic here mentioned.

Opinions differ as to the effect upon our girls of the smattering of anatomy and physiology taught them in our public schools. I have been informed that in the early history of this State an eminent physician and member of the State Board of Education opposed the teaching of these branches in the common schools, saying that

"A little learning is a dangerous thing,"

and prophesying that that little learning would be used for the improper practices of which we have spoken. We do not know that the increase of ante-natal murder has been produced by these teachings, but we do know that since girls have been partially instructed in these sciences, the crime has increased an hundred fold. We therefore cannot dispute him who said

"Where ignorance is bliss,
'Tis folly to be wise."

Another cause of this general turpitude is the ease with which it may be concealed. Women have become so learned that they practice it upon themselves without aid, and in this way escape observation and publicity; and, as has been said, when done by others, the difficulty of enforcing the very imperfect laws is so great, that prosecutions are seldom made, and they have little or no fears of punishment.

There are many other causes, both of a general and special character, which might be mentioned, but we will merely allude to two more, viz.: "Social extravagance and dissipation," both of which are equally mischievous with love of fashionable life.

When we contemplate the morbid and depraved sentiment n the community, the erroneous ideas of the character of the

crime, the imperfect laws founded on false doctrines, the ignorance of legislators on the subject, the difficulties arising from selfish and guilty parties, officers and even jurors, the evil influence of the press, the influence of extravagance and fashion of the wealthy have in the toleration, perpetration, and defense of criminal abortion, we feel that the reform needed is almost a hopeless undertaking: and, as was said by one of our members, our efforts will be nearly as futile as the "Papal bull against the comet." But when we contemplate that annually in this country fœticide is perpetrated 60,000 to 100,000 times, that 6,000 or more women in consequence lose their lives, the misery that results from so many families bereaved of wife and mother, the thousands of sickly women transmitting disease of body and mind to tens of thousands of children, the increase of licentiousness and various forms of vice, the direct consequences of this practice, our minds are filled with horror at the atrocity of the crime, and we believe that all philanthropists should join in an intelligent, persistent and united effort for reform.

Individual effort will accomplish but little. "In union there is strength." The reform so much needed will never come without an earnest, organized, systematic effort of philanthropists and statesmen, and of all organizations and institutions which can be made to bear upon it.

The State government can do much. The Executive should make the necessary recommendations to the Legislature, and thus become an educator of legislators and the people.

Laws can punish, but do not reform nor remove causes. When not understood, appreciated, and approved by the people, they are of little use and seldom executed. Legislators should be well instructed on this subject, and enact laws in accordance with the rational views of our profession—that "to extinguish the first spark of life is a crime of the same nature, both against our Maker and society, as to destroy an infant, a child, or a man." In our courts it should be made the duty of the judge to charge grand juries and prosecuting officers to inquire into and present all such cases. This will tend to prevent crime, by enlightening the bar, the jurors, and through them the people.

Educationists should not be a detriment to the cause. Our girls should be more thoroughly instructed in the laws that govern their physical as well as moral and mental organizations and also the danger of violating the same.

The census bureau, if possible, should be so improved as to gather facts and figures, which, in the hands of compilers of

vital statistics, may give much light and information, which would aid in removing the morbid sentiment of which we have spoken.

Social scientists should certainly investigate this subject—no organization could more appropriately make it a specialty than theirs. They have done much to improve the condition of society. They can do much more by taking hold of it with the intelligence and energy with which they have attacked other evils.

Boards of health and sanitarians should coöperate with us. To them the people look for measures preventive of sickness and death. Let them "impart" a knowledge of the great dangers and frequent death which so frequently accompany the nefarious procedure, and it will do more to stop the practice than any argument that can be offered.

Political economists, by estimating the great loss to the State, will be able to show that this practice is equally damaging with intemperance, pestilence or war. The press, which has done so much mischief to this cause, is capable of redeeming itself, when it shall cease to be an ally of abortionists and venders of abortive drugs, and work with the same talent in this as in the temperance and many other reforms; its good influence will be such that it will be hailed as one of the greatest benefactions of mankind.

The Church can do more than any organization to abate this vice. Rev. Dr. Muller, of Buffalo, says that the remedy for social evils of *every* nature is to be found in the Gospel of the son of God. Bishop Gillespie, in a letter to the speaker, says: "I have long held that the pulpit has a duty with regard to immoralities in society which is only imperfectly discharged. As God's book treats plainly on such departures, so the expounder of that book should speak openly, without any undue deference to sensitive minds."

As physicians, from selfish motives, fear to offend a wealthy, influential, though guilty patron, we can sympathize with the clergyman who fears to offend a parishioner of like character. Every profession and vocation has its duties, the performance of which is imperative, though often attended with personal danger—nevertheless, he who assumes the responsibilities of any vocation, should face its dangers and faithfully perform its duties. The physician must not leave his post in time of pestilence, the surgeon in time of battle, nor can the sentinel be caught sleeping at his post, without incurring the penalty of death. Neither should ministers of the Gospel be deterred by "sensitive minds," wealthy, influential and guilty parishioners,

fear of censure, loss of popularity, place or position, from presenting this subject in an intelligent, forcible manner to "the congregations committed to their charge," and he that has a knowledge of this crime and cowardly neglects his duty, should be censured, like the sentinel caught sleeping at his post, or the surgeon who neglects to apply the ligature to the severed artery.

The Church has not entirely neglected this subject. In a few instances theological bodies have denounced the crime. Bishop Cox, and perhaps a few others have written on the subject, among whom is Dr. Todd, of Massachusetts, who, speaking of the embryo, says: "No one can prevent that development without resisting and annulling one of the most sacred and important laws established by the Divine Author of the universe, and he is a criminal, a murderer who deals an exterminating blow to the incipient man, and drives back into nothingness a being to whom God designed to give a living body and an immortal soul." The late Bishop Armitage and a few others, to their credit, have taken hold of this subject, but generally the Protestant Churches of America have either neglected it, or not worked with any zeal, system or energy in this direction.

In America the Roman Catholic Church have taken the lead of all others in this reform. Its ministers preach from the altar the true doctrine, that the "destruction of the embryo at any period from the first instant of conception is a crime equal in guilt to that of murder;" "that to admit its practice is to open the way for the most unbridled licentiousness, and to take away the responsibility of maternity is to destroy one of the strongest bulwarks of female virtue." Their ministers work systematically, hold special services, give special instructions on this as on other social evils.

The Catholic women set an example worthy to be imitated, for in this country the practice is almost unknown to them. In a practice of forty years, and a professional attendance upon the mothers of nearly 3,000 children, we have never known the crime perpetrated by a married Catholic woman. The women of that church are not generally as learned in the education of our schools as the Protestants; yet, in this matter, if not as learned, they are better educated, and that by the faithful, enlightened ministrations of their clergy.

The Protestant women are educated in the sciences, literature, and the fine arts, and all the accomplishments of modern civilization, but as they have never been taught that this, the greatest crime known to God's law, is anything more than a

mere peccadillo, they look upon it as a small wrong,—the consequence of which is the annual destruction of the vital germ of more than 60,000 human beings, and the lives of 6,000 women in this, our country of boasted intelligence and Christianity.

A popular Brooklyn clergyman said, in the course of a late sermon, "Why send missionaries to India when child-murder is of daily, almost of hourly, occurrence? Aye, when the hand that puts money in the contribution-box to-day, yesterday, or a month ago, to-morrow will murder her own unborn offspring. The Hindoo mother when she abandons her babe upon the sacred Ganges, is, contrary to her heart, obeying a supposed religious law; and you desire to convert her to your own worship of fashion and laziness, and love of greed. Out upon such hypocrisy!"

I see no resort left, no staying this tide of sin, unless it be in the power of the church. There should be no queasy sensibilities, no mawkish delicacy; the sin should be grappled with and crushed out. The pulpit of every denomination should make common cause and fulminate its anathemas against every abettor of this enormity. I know not why such tenderness of speech on the part of the clergy, for there is no such modesty on the part of the actors concerned. Arrayed in gorgeous silks, covered with gems, they enter the physician's office and ask him to perpetrate the crime as coolly as they would order a steak for dinner. Undoubtedly, the Brooklyn clergyman spoke truly of what he knew, fairly portraying a heathenism greater than that of the Hindoo existing in this country, and properly placing to a great extent the responsibility on the church, and on him whose duty it is to expound the law.

However much others have neglected their duties, physicians have neglected theirs more. We are expected to act as the guardians of the lives and health of the people, and particularly are medical men the physical guardians of women and their offspring, and yet we have so far neglected our duty that this practice, which was scarcely known to the last generation, has increased to that extent, producing so much physical and moral degradation as to excite alarm for the stability of our civilization. It is our duty to give counsel to the people on subjects of medical police, hygiene, and legal medicine, to enlighten the public on all matters of public health, physical, moral and mental, and yet, almost unrebuked, our negligence has allowed a public sentiment to grow up which tolerates annually the murder of thousands of women and tens of thou-

sands of their unborn offspring. We cannot, like others, excuse ourselves by pleading ignorance, for we have, year after year, witnessed the rapid increase of the crime, and have been stupid to imbecility and criminally neglectful of our duties in not efficiently organizing and working for its abatement and suppression. When declining to be an actor in the crime, we have too often, for fear of offending "sensitive minds," neglected to explain to the applicant the great moral and physical wrong she is about to perpetrate upon herself, her family and society. We have neglected to inform her husband, her advisors and friends of what she is about to do, and consequently, having a knowledge before the fact, become an accessory to the crime.

We are neither morally nor legally bound to keep inviolate secrets of a crime, except those necessary to enable us to treat our patient successfully—yet, fearing to violate the principles of the Hippocratic Oath, we keep the secrets of the applicants, and so doing, violate the moral laws, our own consciences, and the ethics of our profession in not doing all in our power to preserve the sacredness of fœtal life. In some instances associations of physicians have passed resolutions condemning the practice. The Amerian Medical Association offered a prize, which brought forth the valuable works of Dr. Storer, yet we have no efficient organization to effect the needed reformation. Physicians, being the best informed, are consequently the best qualified to give instructions, and, therefore, should take the initiative for abating the crime.

Before entering upon the instruction and reformation of others, we should purify our own ranks, remove the beam from our own, before we pluck the mote from our brother's eye, and enter upon such offices with pure hearts and clean hands. If physicians are to be reformers, no suspicions should be permitted to rest upon the recognized members of the profession. To keep the profession pure, a high state of intellect, education, character and aptitude for the same should be the only passports to our ranks. If young men entering the profession have not these qualifications, they will always be medical dwarfs, and are the kind to lend themselves to the commission of this crime, even before the paint is dry upon their signs or the ink on their diplomas. Therefore, let us have fewer and better doctors.

The wiles, artifices and strategems which women use when besieging their physician for the commission of this unnatural practice should not only be met with firmness and decision, but with such teachings and instruction relative to the nature, consequences and criminality of the practice, as is due them

from the guardian of their physical condition. Treat the abortionist as a wretch dangerous to society, ostracise him socially and professionally, teach the people to avoid him as the plague or pestilence; and if, with brazen impudence or serpent-like cunning, he intrudes upon your friends, warn them that he "is unclean," advise them "to pass out of his way and make room for the leper." Room! room!

Our next duty is to instruct all who can coöperate and assist us in this undertaking. The profession occupies a position similar to a normal school, the business of which is to instruct teachers, and the question arises, how can this best be done? It has been thought that delegations or committees from the various medical societies should be sent to the different organizations of which we have spoken as being necessary to coöperate with us. Let competent men be selected to present this subject, personally or otherwise, to the governors and legislatures. They, without doubt, will procure the enactment of such laws as the profession, in their deliberations, think best. Others, suited to the position, can be directed to confer with educationists, others with boards of health, with sanitarians, social scientists, with associations of members of the press, and last, though not least, the various theological bodies, where, we doubt not, they will be received as the representatives of an honorable profession, and will obtain their coöperation. The result of this will be the enactment of better laws, an improvement of the press, to make teachers of the members of the various societies of which we speak, and, particularly, will so enlighten the clergy that they will enter upon this work with the zeal, energy and success they have done in various other reforms.

Ladies and gentlemen, I have detained you too long. Much that I have said has necessarily been suggested or stated by others. To my correspondents I return thanks for much valuable information they have so kindly furnished. The recommendations and suggestions may seem chimerical, radical, and impractical, but they are based upon the belief that success in our undertakings depends entirely upon educating the people to understand the nature, causes, and evil effects of this, the great crime of the nineteenth century, and that without the coöperation of the various associations of which we have spoken a reformation will be impossible. We do not suppose they are all, nor the very best that can be made. They are mostly new measures, and we invite criticism and suggestions of other and better ones to accomplish the same object.

A revival preacher once said to his congregation: "I am

censured for using new measures for the conversion of sinners and the salvation of souls; and you favor no measures at all for the same purpose. I care not whether you be old or new measure men, but hope you will not be *no measure men.*"

So with regard to suggestions now made. I care not whether you adopt them or not, provided you will practice other and better means to produce the same result; but pray you will not be *no-measure men,* and trust that our profession will take hold of this subject in *earnest*; that physicians will make "*a long pull, a strong pull, and a pull altogether;*" so that before the heads of our young members become "silvered o'er with age," they may have the happiness of knowing that this most cowardly crime is made odious, and is no longer perpetrated with impunity; that the depraved public sentiment which tolerates and causes it no longer exists, and the satisfaction of having done their part in rescuing the people occupying the land recently wrested from Indian paganism from a condition leading to a *half-civilized heathenism.*

SHORTNESS OF THE UMBILICAL CORD A CAUSE OF RETARDED LABORS AND OF ACCIDENTS.

BY E. P. CHRISTIAN, M. D., OF WYANDOTTE.

Labors are occasionally met with in which there is an exceptional and unnatural shortness of the umbilical cord. These cases of absolute brevity are rare, but not infrequently cases occur in which there is accidental shortening, as it is called, by reason of one or more turns of the cord about some part of the fœtus, generally the neck. This usually occurs when there is excessive length of the cord; and indeed, so common is it to find these circumvolutions, that to those accustomed to look for the design, even in minute details of nature's operations, the suggestion occurs that whereas, as a general rule, provision has been made for rather a superabundance of this appendage, to obviate the dangers which would arise from brevity, whether in this, so common a disposal of it, a safeguard is not designedly provided against the greater danger to the fœtus from a prolapsus by reason of a superabundance, and also a provision for the separation of the placenta with lengthy cords, by and with the expulsion of the fœtus.

What constitutes unnatural brevity and wherein may it complicate labor, to the jeopardy of mother or child? On this point there is a wide and remarkable difference of opinion among those obstetric authors whose works have been accessible to me. I find no reference to brevity of the cord as a possible cause of delay or danger in labor in Leishman's System of Midwifery, Churchill's System of Midwifery, Ramsbotham's Process of Parturition, Simpson's Obstetric Works, Playfair's System of Midwifery, Bedford's Principles and Practice of Obstetrics. Dewee's System of Midwifery says: "It is said that too short a cord, either natural or accidental, will inter-

rupt a natural labor and oblige us to finish it by turning. I shall not positively deny the existence of such a condition of the cord, but must say I have never seen an instance, and also, that I entertain strong doubts of its possibility."

Smellie (Midwifery) recites cases of retarded labor by reason of shortness of the cord, and also by reason of circumvolutions about the fœtal neck, etc., accidentally shortening it. But McClintock, the editor of his works, remarks: "I never met a case where I could be sure that delay was occasioned by shortness of the funis, or its circumvolution of the neck. Nay, I must confess to being somewhat skeptical as to the bare possibility of the thing."

On the other hand, Chailly (Midwifery) says: "Shortness of the cord operates unfavorably on the progress of labor, the life of the fœtus and that of the mother. This shortness may be natural, that is, the umbilical cord may be very short; it may be accidental, in consequence of the cord, naturally very long, becoming shorter by making turns around the limbs, neck, or trunk of the child. Further, whatever may be the cause of this shortness, may occasion many accidents, such as slowness of the labor, the death of the fœtus, the premature separation of the placenta, the inversion of the uterus, etc."

King (American Obstetrics) says: "Shortness of the cord may be the cause of protracted labor. It may be very short, not exceeding several inches in length, so that it becomes torn as the trunk and inferior extremities are expelled, or its ligature and division may be required before these can be extracted. Most commonly, however, the shortness of the cord is accidental, occasioned by its being twisted several times around the neck or body of the fœtus."

Cazeaux (Theoretical and Practical Midwifery) makes fuller and completer reference to accidents and dangers from this complication than any other author we have referred to. He says: "The cord may be very short naturally, and, as elsewhere stated, has been known not to exceed four or five inches in length, but such cases are very rare; most generally its brevity is accidental, that is, it results from the numerous turns made around the trunk, limbs, or neck of the child; indeed, the formation of these circular loops is favored by an unusual length of the cord."

"An accidental shortening may render the accouchement difficult, either by retarding its progress or by making it absolutely impossible, or by causing the death of the fœtus. This latter circumstance may result from constriction undergone by the vessels in the neck, when the cord is tightly wound around

this part, or it may be owing to interruption in the circulation of the umbilical vessels, from the stricture of the cord itself when it closely encircles a limb, etc." In regard to absolute shortness, he says: "We have met with a case where the unusual shortness of the cord, which was only nine inches in length, certainly detained the head above the superior strait for fifteen hours after the rupture of the ovum and the entire dilatation of the os uteri." He mentions a case occurring at La Clinique in 1838, of accidental shortness occasioned by turns of the cord around the child's neck, when a division of the cord, which was not made until two hours after the escape of the child's head, could alone effect a termination of the labor. The fœtus was born dead. He also says, "Delamotte furnishes an instance precisely similar to this." It is to this complication, mainly, that he attributes such dangerous accidents as rupture of the cord and premature separation of the placenta.

Such are the references we find to the shortness of the cord as a complication of labor; many authors making no reference to it whatever; others referring to it briefly as an alleged cause of difficulty, delay, or danger, but denying their belief in the complication as offering any serious delay or danger; and others referring in detail to the accidents which may arise from it, and treating the subject with the importance it deserves if it may be the cause of such accidents.

The accidents to which the condition may give rise as charged may be summed up as follows: unusual delay in labor and consequent increased danger to child and mother; danger of death of child by constriction of neck; also by obstruction to placental circulation, risk of rupture of funis, and of premature separation of placenta, with resultant danger to mother and child; also, by Cazeaux, danger of inversion of uterus. To these I may add increased suffering of the mother by the tearing, dragging pain in the uterus, and particularly that part to which the placenta is attached, and by the delay in the often agonizingly painful second stage, with distended perinæum and spasmodic action of perineal muscles; danger to child, not only by constriction of vessels of the neck by the cord, and obstruction to placental circulation, as stated, but also from cerebral pressure in delayed second stage, and danger of production of umbilical hernia in child, and of at least temporary vesical paralysis, or loss of power of emptying the bladder in the mother by reason of prolonged compression.

In regard to inversion of the uterus alluded to as a possible result of brevity of the cord, even authors silent on the subject of shortness of the cord as a cause of accidents, or incredulous

as to its efficiency in that way, attribute this accident, inversion, commonly to injudicious pulling on the cord after expulsion of the child. Indeed, this is generally alluded to as a cause of the accident; and if it may be so caused, it must be admitted theoretically possible in certain peculiarly attached placental cases at least of shortness of the cord; as in the cases related by Cazeaux, in one of which he says, as before stated, "The unusual shortness of the cord, which was only nine inches in length, certainly detained the head above the superior strait for fifteen hours after rupture of the ovum, and the entire dilatation of the os uteri;" and in another in which delivery of the trunk and body could only be accomplished by severing the cord; and in the similar case of Delamottes, to which he refers. But not only this: cases have occurred which can more rationally be accounted for in this way than in any other, unless we regard the normal uterine contractions more potent to produce the accident than the tension of the short funis on the uterine walls. Some authors confess that there are cases which cannot be accounted for in that way, by pulling on the cord. Simpson says: "Most authors attribute inversion of the uterus to causes purely mechanical, such as pulling rudely and violently at the funis in order to remove the placenta; but that this is not always the origin of inversion is evident from a number of circumstances, etc., etc.;" and he says the accident has happened where women have been delivered unaided.

Playfair also says: "Inversion of uterus often occurs spontaneously." Is it not reasonable to suppose, and more probable, that brevity of the cord acts as an important factor in many of these cases? It is probable, however, that in these cases the place of attachment of the placenta, together with a short cord, operate together to produce the accident. If attached to the anterior parietes of the uterus, the force drawing on the cord would be so spent where the cord passes over the posterior surface of the pubes, as to make it seem incredible that even violent pulling on the cord, much less uterine contractions, could produce inversion in such cases; while if the placenta be attached to fundus, or posteriorly near the fundus, the force would approximate more to being expended in a direct line, and much less power lost. The suggestion also occurs, whether in such a case, with an adherent placenta,—a condition which has occurred in the writer's experience,—there might not be danger of inversion from the use of the forceps. Fortunately, in my case no such accident occurred. It is also probable, that in retarded labor, from shortness of the

cord, either absolute or accidental, the place of attachment of the placenta has the greatest influence in respect to the delay; the attachment, high up or low down in the walls, not only determines its relative length in a measure, but also otherwise influences the dynamics of labor. By the tension of a short funis in a contracting uterus, the muscular fibres of that part of the uterine wall to which the placenta is attached are put in a state of tension antagonistic to the normal contraction, and rendered inefficient. One part antagonizes and neutralizes the contractive power of the other part to a certain extent, and if the attachment be at or near the fundus, the most efficient expulsive force is thereby rendered inoperative.

The following cases are given in brief, as illustrating the influence of brevity of the funis in parturition. (The first and fifth cases were reported in a paper read before Wayne County Medical Society in 1878, entitled "Complications which may arise from Circling of the Fœtal Neck," but never published.)

Case 1. Mrs. D., a strong, healthy Irish woman, was in her fifth labor Sept. 1st, 1866. Her previous labors natural in every respect. In this case, notwithstanding sufficiently vigorous pains, progress was slow, and when the head had descended into perinæum, unusual delay was experienced, the head advancing with each pain, and again receding with the subsidence of the pain, to an unusual extent. The head was at length expelled, but with still more vigorous pains there was no advance of the body. Traction with the fingers in the arm-pit was inefficient in causing further advance. I was alarmed for the safety of the child, and the mother was suffering agonizingly. From the unusual delay at this stage, with a capacious pelvis, and from the marked recession of the head after the subsidence of each pain, I thought of delay by reason of a short funis; and passing up my hand along the child's abdomen I discovered a tense cord. This I succeeded in severing with scissors, and the child was immediately expelled like a projectile. The child was saved by the severing of the cord, but in this case there was no cording of the neck. Notes of the case say the cord was very short, but do not give its length. Had the shortness been caused to the same extent by circumvolutions about the child's neck, there is little doubt in my mind but that the child would have been lost, or had there been a few minutes more delay in severing the cord it is probable the same would have happened.

Case 2. The same patient, as in preceding case, was confined in her seventh labor March 19th, 1870. Her sixth labor was easy, natural and speedy, as were her first four labors: Labor

pains regularly established at 12 P. M.; os fully dilated at 2 A. M., but head remaining high up; membranes ruptured during pain at 2.30 A. M.; advance of head very slow, and had not descended to perinæum until 5 P. M. Forceps were applied and labor terminated at this time. Two complete coils of funis around child's neck. The child gave a few feeble gasps and expired. Placenta detached and came away immediately by compression of womb.

Case 3. Mrs. R., confined of her seventh child, June 16, 1875. The notes of the case state that the abdominal integuments of the child were drawn out an inch at attachment of funis, by reason of shortness of funis. The child was afterward the subject of a troublesome umbilical hernia.

Case 4. Mrs. B., confined of her first child July 10th, 1875: Labor pains severe, but progress slow for fifteen hours; for the last three hours her sufferings so acute during the pains that she was kept partially under influence of chloroform, and but little advance being made during this time; the os being fully dilated, she was anaesthetized and forceps applied; funis ten inches in length. Child living and survived; placenta detached, as evidenced by immense discharge of blood following the child, and by its coming immediately away by compression of womb.

Case 5. Mrs. B., first labor, Sept. 11, 1875: Labor tedious and painful: delivered naturally of a still-born child, evidently but a short time dead; cord four times coiled around child's neck. No notes as to its total length, or in regard to placenta.

Case 6. Powerless labor—premature separation of placenta—flooding and nearly fatal collapse from coiling of funis around fœtal neck.—Mrs. C. was confined in her tenth labor March 3d, 1878, under care of a midwife. All her previous labors natural and without accident. I was called at 11 P. M. Patient delivered a half hour before. Midwife said Mrs. C. had been sick all day, but without pains until the very last, when, with a pain of great severity and force, the child was expelled, followed by an immense discharge of blood, filling and saturating the bed and bedding. Four quarts of clots were gathered up from the bedding, besides what had soaked into the clothes. The child was born with three coils of the funis around its neck, and was nearly strangled. Alarming and dangerous prostration immediately ensued with the mother. I found her deathly pallid, in a cold and clammy sweat, pulseless at the wrists, and with the general distress accompanying the state of collapse. I introduced my hand without delay, removing the placenta, keeping up steady pressure over the

womb with my hands, gave stimulants and ergot freely, and after several hours only felt sufficiently assured of oncoming reaction in the patient as to feel safe in leaving her. This patient, in her powerless labor throughout the day, should have had ergot or quinine administered to her, and, under the care of a medical man would likely have escaped the danger to which she nearly succumbed.

The above cases, fair examples of the influence of brevity of the funis in parturition, are taken from my record of cases, kept without any reference to this special point. In the following table of cases, the records have been kept with that object more especially in view, first to determine the relative frequency of cording of the fœtal neck by the funis, and second, what, if any, effect the cording had upon the labor.

The record is of thirty-seven consecutive cases, too small a number from which to generalize with any great reliance, perhaps, but still, as we believe, offering interesting suggestions. The table gives the number of the pregnancy, length of funis, not estimating fractions of inches, the length of second stage approximately, states whether the placenta remained attached or was detached with expulsion of child, as determined by free discharge of blood following or accompanying expulsion of child, and by the placenta itself coming away readily by manual compression of uterus, where uterine inertia did not exist, and states such other facts as possess any interest or bearing on any deductions which we have thought might be drawn from them:

NAME.	No. of Labor.	Length of Funis.	Length of 2d Stage.	No. of Circumvolutions.	Placenta detached or remaining attached.	REMARKS.
Mrs. Smith	2d.	17 in.	slow.	.....	detached.	
Mrs. Shaw.....	6th.	20 "	speedy	1	"	
Mrs. Millhouse...	1st.	24 "	2 hrs.	2	"	Child badly asphyxiated but resuscitated.
Mrs. Millspaugh..	1st.	33 "	1 "	2	"	
Mrs. Nestor.....	7th.	20 "	.....	.....	.....	Retained 10 hours; I was called in to remove it. Under woman's care.
Mrs. Anspach....	2d.	30 "	20 m.	1	"	
Mrs. Benson.....	3d.	20 "	1 hr.	1	"	Trunk delivered by strong traction, after expulsion of head.

RECORD OF CASES—CONTINUED.

NAME.	No. of Labor.	Length of Funis.	Length of 2d stage.	No. of Circumvolutions.	Placenta detached or remaining attached.	REMARKS.
Mrs. Daniels	10th.	22 "	.....	2	detached.	Detention at shoulder.
Mrs. Klatt	7th.	22 "	15 m.	.....	"	
Mrs. Wren	1st.	30 "	1 hr.	1	"	
Mrs. Muncer	1st.	27 "	1 hr.	1	"	
Mrs. Gowman	5th.	26 "	15 m.	.....	"	
Mrs. Little	7th.	15 in.	5 m.	.....	"	
Mrs. Allen	9th.	19 "	5 m.	1	"	
Mrs. Porter	1st.	18 "	30 m.	.....	"	
Mrs. Beatty	1st.	20 "	1 hr.	1	"	
Mrs. Pocock	3d.	24 "	20 m.	.....	undetached.	Considerable delay in removing placenta.
Mrs. Nuttall	4th.	17 "	5 m.	.....	detached.	
Mrs. Krum	1st.	16 "	2 hrs.	.....	"	Forceps; great discharge of blood following child.
Mrs. George	7th.	29 "	1 hr.	.....	undetached.	Uterine inertia.
Mrs. Pardo	1st.	17 "	2 hrs.	.....	detached.	Forceps.
Mrs. Bessey	4th.	31 "	5 m.	.....	undetached.	
Mrs. Heude	1st.	18 "	2 hrs.	.....	"	Forceps.
Mrs. Brighton	7th.	22 "	20 m.	.....	"	
Mrs. Gerrardin	6th.	20 "	5 m.	.....	detached.	
Mrs. Job	5th.	30 "	30 m.	.....	undetached.	Breach.
Mrs. Whipple	1st.	20 "	30 m.	.....	"	
Mrs. Sullivan	7th.	36 "	10 m.	.....	"	
Mrs. Lawrence	3d.	22 "	5 m.	.....	"	
Mrs. Eckley	1st.	18 "	30 m.	.....	"	
Mrs. Rentz	2d.	27 "	2 hrs.	1	detached.	Forceps.
Mrs. Kirby	3d.	18 "	5 m.	.....	"	
Mrs. ———	2d.	24 "	5 m.	.....	"	Child still-born; dead some time; decomposition commenced; placenta disorganized; syphilitic.
Mrs. McClary	9th.	21 "	2 m.	.....	"	
Mrs. Barley	7th.	22 "	5 m.	.....	"	Breach presenting.
Mrs. Watkins	10th.	25 "	short.	.....	undetached.	
Mrs. Labadie	5th.	25 "	1 hr.	1	detached.	

What is the length of the normal funis, and what the limits under or beyond which it may complicate labor? It has been observed from six inches to fifty or more in natural labors; Cazeaux says it generally measures from 21 to 23 inches.

Of the 37 cases here tabulated, the length ranged from 15 inches to 36 inches. Assuming 22 inches as an average, there were 20 of the 37 equaling or exceeding that length, and 17 under it.

Of the whole number (37), twelve were complicated with circumvolutions of the funis about the child's neck, nine with one coil, and three with two coils; in which cases the length varied from 19 inches to 33 inches.

In two cases in which measurement of the length of the circumvolution was made, it was 10 inches. Allowing nine inches as the average length, then in these cases of circumvolutions the free length of funis not involved in the coils ranged from 4 inches to 21 inches.

Of the 12 cases with circumvolutions, in 8, or 66 per cent, the second stage exceeded one hour; while of the 25 cases in which this condition did not exist there were but 4 cases, or about 16 per cent in which the second stage was protracted to one hour. Of these 4, 3 were primipare, in which forceps were used, and with cords of the length, respectively, of 16, 17, and 18 inches, —the last with adherent placenta requiring to be detached by hand, and the other was one of uterine inertia.

Of the whole number of cases (37) there were four forceps cases; the three above noted with cords of 16, 17, and 18 inches, without circumvolutions, and only one forceps case with circumvolutions,—this with a cord of 27 inches, reduced by the coil to 18 inches or less. Therefore, in all the forceps cases the free length was under 18 inches.

There were also in these 12 cases of accidentally shortened funis, besides the one forceps case, one case of tedious labor, in which the second stage having been prolonged for two hours, I was sent for by midwife in attendance to apply forceps. Finding that the child would soon be expelled, I did not apply them. The child was born asphyxiated and with difficulty resuscitated. Length of funis, 24 inches, reduced by the circumvolutions to 6 inches free.

There were also two other cases with detention of child at shoulders, requiring strong traction to complete delivery. In one, a funis of 20 inches reduced by one circumvolution to 12 inches. In the other, a funis of 22 inches reduced by two circumvolutions to 4 inches.

As regards the placenta, we use the term attached in speaking of it, not in the sense of an adherent placenta, but as unseparated from the uterine walls. In every case of corded neck (12), the free lengths being under 18 inches, the placenta is noted as separated during expulsion of child (detached); also in 11 others, in 9 of which the funis is under 22 inches in length, and in 3 cases exceeding 22 inches. In the 12 cases of undetached placentæ, the cord being in every case free from coils; in 7 the cord was 22 inches or more in length, and in 5 under that length.

In one case of forceps delivery with a cord of but 18 inches, the placenta was also undetached. In this case the placenta

was adherent, and had to be detached by hand, which probably accounts for delay and indications for forceps.

In conclusion, then, we believe that such observations will show that brevity of the funis below 18 inches will operate to retard an otherwise natural labor, and occasion danger of a variety of accidents to mother and child. That cording of the child's neck or body, and thus accidentally shortening the funis below 18 inches, will have the same effect, and be more dangerous to the child. That in labors with cords under 18 inches free the placenta will be generally found detached during expulsion of child. That in a considerable proportion of retarded labors calling for application of the forceps a short funis will be found below 18 inches in length, either naturally or accidentally shortened to that length.

SOME REMARKS ON HOUR-GLASS CONTRACTION OF THE UTERUS.

BY J. S. CAULKINS, M. D., OF THORNVILLE.

There appeared in the February number of the Detroit Lancet an article by Dr. Bradley on "Hour-Glass Contraction of the Uterus," which is calculated to excite study of the subject, and was the cause of making this note of a case of it. In the paper referred to, the novel * theory is advocated, and supported by the authority of Playfair, that the above mentioned troublesome accident is a spasm of the os uteri internus, and not, as we have always supposed and been taught to believe, on the credit of some of the most eminent writers (Churchill *et al.*), an irregular contraction of transverse muscular fibres of the body of the uterus, dividing it into two chambers, in the upper of which the placenta is occluded.

In his advocacy of this theory, Dr. Bradley need not be surprised if converts to it are slowly made, for the reason that every observer that has removed a retained placenta in such a case gets the impression that the upper of the two chambers into which the constriction divides the uterus and in which the secundines are retained, is much the smaller part of its cavity. In full term cases the apparent relative proportions of the two chambers might be roughly estimated to be three or four for the lower to one for the upper; in the aborting cases the apparent relative difference of size is greater still.

* Perhaps the epithet "novel," as used above, may be criticised, for there are other authors besides Playfair that hold this view, but enquiry, as far as made, seems to show that the opinion of Churchill is the one commonly (universally as far as enquiry has gone) entertained by the profession. This is plainly stated by him as above, and accompanied by a cut of a longitudinal section of the uterus, showing the stricture around the body and the two chambers, with the retained placenta in the upper.

Dr. Bradley's strong argument for his position is anatomical. There are, he says, no transverse muscular fibres that go completely around the uterus except those found in the cervix, and there can be consequently no complete transverse spasm at any other point; and if his anatomy is right, and hour-glass contraction is circular spasm, his position is incontrovertible. Of course there must be circular fibres, or there cannot be circular constringement; or, in other words, an elastic band, in order to make two closed cavities of an empty bag, must go entirely around the bag. If the band in its stretched state is fastened at each end so as to make a partial circuit, its contraction would make two cavities connected by an isthmus, and to the hand introduced into the bag the resistance of the constringing band would be felt on one side and not on the other. Is such a partial narrowing of the body of the uterus the explanation of hour-glass contraction? We can readily conceive that such a condition might be a serious impediment to the escape of the placenta. The question is not one to argue about, but one to answer by careful observation. Is the stricture felt equally on all sides by an observer's finger or is it not? In the case reported below particular attention was paid to this point, as will be seen.

Harriet Miller, aged 30, large and loosely built, belonging to the sect of grass widows, aborted about the fourth month of a criminal pregnancy, April 6th, 1879, the miscarriage being caused, as was stated by the man whose house she kept, and who was supposed by the neighbors to be her paramour, by taking oil of turpentine in large doses. On my arrival to see this case, it was found that the fœtus had been expelled about five hours previously; that the placenta was retained in spite of sufficiently vigorous pains to expel it; that no funis was hanging out; that there had been severe hemorrhage which had stopped. Seeing that it was necessary to remove the placenta manually, no time was lost in doing so; and nothing being in reach of the finger but clots of blood, the whole hand was passed into the uterus to make search for it. On making the exploration, my first impression was that there was a mistake in the positive statements that had been made to me with regard to the retention of the placenta, and that it had already been got rid of, for apparently the only content of the capacious uterus was the large and quite firm clot which filled its cavity. I came near acting on this first impression by withdrawing my hand and making search for the placenta in the bed, but having this question of hour-glass contraction in my mind, I concluded to first make sure that my case was not one of that

kind, although from the size of the cavity explored the supposition was not probable. To my surprise, however, I found that through what I had taken to be the fundus, the finger passed into an upper cavity containing the placenta. It was, after all, a case of hour-glass contraction. One finger not being enough to dislodge the after-birth, two were with some difficulty (the stricture was so tight) passed up and hooked around the placenta, which was thus dragged into the lower cavity and expelled with the clotting, being in its longest diameter about four inches, in its shortest not more than one, in structure very dense and white.

The length of hand and arm passed into the uterus was eleven and one-half inches; allowing two inches of which for distance from outside to cervix, and one and one-half inches for upper cavity, we have left eight inches, which must be, according to the theory advocated by Dr. Bradley, the length of the dilated cervix.

In making the exploration, definite observation of the character of the stricture was made, and this was found to be of uniform tension on all sides, being without doubt the constriction of circular fibres. If there are no such circular fibres in the body of the uterus, then the seat of this stricture must have been the internal os, and the lack of contractile action in the distended cervix, while vigorous contractions went on in the uterus itself, accounts for the apparent neighborhood of the stricture to the fundus.

In a full term recent case, 29th Sept., 1878, the same deceptive appearance was found, as though the stricture was at least beyond the lower half of the uterus.

Mrs. Mary Ann Harbar—age 24, tall, raw-boned, strong and healthy—primipara—labor very tedious, with strong but not expulsive pains; ergot was freely used, but with no good effect. It was a good case for forceps, as relaxation was perfect, and as it was pretty evident that the woman's strength would fail before nature would bring the child, they were successfully used, and the living infant extracted by their aid. The secundines not being expelled in proper time, further interference was seen to be necessary to get rid of them, and after an hour's delay they were manually removed. The trouble was hour-glass contraction, and the stricture was not, as in the former case, below, but around the placenta, the larger half of it being in the lower chamber of the uterus.

In two former full term cases the placenta was grasped by the constriction, and no instance is recollected in which the upper chamber contained it all.

Perhaps these cases are what Cazeaux, whose statements on the subject of hour-glass contraction seem somewhat obscure, calls encasement of the placenta. If this and his encystment are really different conditions from hour-glass contraction, the fact must be determined by observing the tension of the stricture, and if this is uniform, showing the spasm of circular fibres, there is strong reason to suspect that his conclusions and classification of retained placenta from irregular contraction are fanciful.

Cause.—It is not known what the irritations are that cause the reflex action of the circular fibres, that we call hour-glass contraction. Ergot has been much blamed for it, whether rightfully or not cannot yet be decided. Certainly it cannot be the sole cause, for the accident is described as long ago as 1775, by Alexander Hamilton, of Edinburgh, who probably never even heard of the use of ergot in labor. The rubbing and bruising occasioned by the forceps in instrumental cases is another alleged cause of the mischief, but since, in the first case described above, neither of these agents had been used, there must be other sources of irritation that produce the reflex action. It may be possible that mental impressions can operate to cause the trouble. In the first case ever seen by the writer the woman experienced a great fright about an hour before the close of the labor.

Diagnosis.—It is not probable that hour-glass contraction can be detected by external palpation, nor has the claim to do so been made by any reputable teacher, so far as known. There is no symptom that is infallibly diagnostic of the condition, but when there is retention in spite of vigorous afterpains, and we can, at the same time, exclude abnormal adhesions, by the absence of any history of inflammatory action, pain, soreness, external injury and the like, we will have good reason to suspect its presence, but nothing except manual exploration can make it certain.

Treatment.—Not being acquainted with the causes of the spasm, we of course possess no means of preventing it, or of relaxing it after it takes place; the only treatment that we know being that described by Hamilton 100 years ago—the careful removal of the secundines by the hand, inserted into the uterus with the funis for a guide. One practical point in making the exploration is of great importance, and that is to pass the fingers completely around the placenta before grasping it to bring it away, to make sure that there are no abnormal adhesions. The two conditions might exist together.

Conclusions:

1. We do not know what causes the spasm in hour-glass contraction.

2. There is no proof that ergot, given during the labor, causes it.

3. Nor that the use of the forceps causes it, no statistics showing that its relative frequency is greater now than before these agents were so much used as at present.

4. We have no certain diagnostic of the condition, and no treatment but removal by manual interference.

5. We are deceived in our location of the spasm by the want of coördination in the contractions of the muscles of the cervix and those of the body of the uterus.

6. Till some anatomist demonstrates the existence of *circular transverse* fibres in the body of the uterus, we must admit that the Playfair-Bradley theory is true, *at least so far as the case reported* is concerned; whether or no it *ever depends on other causes* is a matter for future study.

FATAL USE OF THE ASPIRATOR—EXPERIMENTS ON THE INTRODUCTION OF AIR INTO THE VEINS.

BY HAL C. WYMAN, M. D., OF DETROIT.

I am led to a study of this subject by reading reports, published in the Indianapolis Journal, of an inquest held by the coroner upon the remains of a woman who died suddenly during the aspiration of a pelvic tumor by a distinguished practitioner in that city.

The verdict was, that air must have entered the circulation by minute veins or capillary vessels, as careful dissection failed to reveal any wound of the large veins. The most eminent medical men in the city testified in the case, and I cannot do better than give their account of it, and description of the autopsy.

The patient had been aspirated some months before, and a quantity of pus drawn off through the vagina from the region of the left ovary, which operation greatly improved her health. However, symptons of a return of the abscess appeared, and she consulted her physician for the purpose of having the aspirator used again. The needle was introduced through the vagina to the left of the uterus, a distance of three-fourths of an inch. Only a small quantity of blood appeared at the end of the instrument, and thinking that it was plugged by a clot, the aspirator was applied, and the point of the needle turned a little to one side.

* "As soon as the pumping was commenced the patient manifested pain; she became convulsed, grew purple, threw her hand behind her, indicating that she suffered pain in the

*Sworn statement of Dr. T. B. Harvey.

back; called for water, and drank it. The needle was immediately withdrawn. The doctor applied his ear to the chest and could hear the heart pumping air. "Congestion of all the superficial veins followed, and by pressure with the finger on some of them the air could be felt. The heart continued to pulsate about ten minutes."

*In about three minutes after the first alarm she became comatose. "There was not more than four or five movements of the instrument before her complaints, and none after." The coroner thought it his duty to hold an inquest, as the patient was an inmate of a public institution. "The autopsy revealed a small punctured wound on the left side of the vagina one and a-half inches before its junction with the uterus." Only a small probe could be passed through the puncture. The probe passed upward and to the left three-fourths of an inch, in the direction of a soft tumor in the uterus. Around the track followed by the probe was not more than a tea spoonful of clotted blood. A close network of small veins was traversed by the puncture just outside the vagina, but after the most diligent search it was seen that no important blood vessel had been touched. The areolar tissue around the uterus contained air. The left lung was much congested. The right chambers of the heart were filled with air and contained no blood. The left chambers were empty. The valves were normal. The veins of the stomach were distended with air, presenting the appearance of pale round worms. The spleen was twice the normal size, and the left kidney was deeply congested." These are the points on which the verdict, death from the accidental entry of air into the circulation was rendered, and the attending physicians cleared from the stigma of unskillful treatment.

This subject, "the entrance of air into the veins," was investigated with care by Erichsen and Gross, among the English writers, and by the leading experimenters of the earlier part of this century, yet *post mortem* appearances, described by them, are by no means pathognomonic of the entry of air into the circulation, although in the case quoted the *post mortem* certainly justified the verdict that air entering the circulation caused the death of the patient.

It is not my purpose to enter exhaustively upon the diverse effects produced by the presence of air in the veins, but to show by the case quoted, and several experiments made upon dogs, that surgical operations, regarded as least dangerous, may by the introduction of air become most perilous.

*Sworn statement of Dr. C. A. Ritter.—[Indianapolis Journal, May 17th, 1879.]

As long ago as the time of Morgagni, Valsalva, and Bichat, it was known that air, even in small quantities, suddenly injected into the jugular vein would cause immediate death, and that when introduced slowly it would be tolerated with much distress. Bichat believed that a single bubble would be immediately fatal. An experimenter thought he proved that a cubic inch was necessary to destroy a large dog, and that smaller quantities would produce alarming symptoms.

The first fatal results following the introduction of air into the veins was observed by Beauchesn in the year 1818. The French Academy, in the course of an investigation of the case, made many experiments on lower animals.

In so far as I have been able to learn, in all fatal cases, except the one lately occurring in Indianapolis, the air entered during operation about the neck, face, or axilla, in the regions where the flux and reflux of venous blood gives origin to the term "venous inspiration," which means that the blood in the veins fluxes toward the heart during inspiration, and stands quite still during expiration. Canalization of a vein was a condition favoring the introduction of air, discovered by the commission appointed by the French Academy.

All writers on the subject describe a peculiar sound of a hissing, gurgling or sucking character issuing from the heart, as pathognomonic of the accident, and mention syncope and coma as sure to follow.

Erichsen made experiments on dogs verifying the symptoms described by the older writers, and said that "death occurs in consequence of the air and the blood being beaten up together in the right cavities of the heart into spumous froth, which cannot be propelled through the pulmonary vessels; hence, there is a deficient supply of blood to the brain and nervous centers, and fatal syncope comes on, attended usually by convulsions. In addition to this, the frothy mixture in the ventricles becomes unable to close the valves of the heart, and the organ soon comes to a stand-still."

Skey, in his Operative Surgery, says, "Many examples of this terrible accident have been recorded. In many instances the obscurity of the cause and, therefore, the doubt which must necessarily arise as to the efficacy of the means we should employ to restore the vitality of a patient, all conspire to confuse and embarrass the mind of the operator. The *post mortem* appearances which have been generally observed are, briefly, great venous congestion, the right side of the heart more or less distended with blood, rendered frothy by the presence of air, of which a quantity is also usually found

in the pulmonary artery, and more rarely in the *vena cava superior*, the left side of the heart contracted, containing little blood and very rarely any air; the lungs appear healthy."

I have been thus particular to give the opinions of those who have made experiments, for the purpose of comparing their views with the results obtained by several experiments lately performed by myself, and with a view of accounting for the difference in the results obtained by various experiments.

I have destroyed animals to show the difference in the *post mortem* appearance resulting from the introduction of different quantities of air, and from introducing it either slowly or suddenly. Experiment 1 shows that a quantity of air, introduced suddenly, does not always cause the *post mortem* appearances described by Erichsen, and the majority of writers.

An incision was made in the neck of a large dog and the internal jugular vein exposed; a fine aspirator needle was introduced, and an ounce syringeful of air injected forcibly. Before the needle could be withdrawn, convulsions appeared, the surface became decidedly cool, a peculiar gurgling sound was heard in the chest, intense pallor of mouth and tongue, which soon changed to lividity; tumultuous action of the heart, and coma, with very difficult inspiration. Death, apparently from asphyxia, followed in two minutes. *Post mortem*, made 16 hours after, showed mouth and tongue still livid; left side of heart firmly closed upon small dark clots; right ventricle and auricle distended with ordinary blood; valves all normal; lungs in depending parts slightly congested; cerebral veins engorged with blood; pulmonary artery filled with blood. Could find no air, or bubble, or spumous froth in any of the vessels. Think it escaped by transpiration through the tissues, as air could not be found in any part of the body. Think this fact worthy of notice, since in all the experiments and accounts of autopsies of which I could obtain record, it has never occurred that the air might possibly escape *post mortem*. This fact might account for the fruitless search for cause of death in some of the autopsies made after sudden deaths following surgical operations.

In the experiment the quantity of air introduced was definitely known, and its destructive effect upon life was almost immediate, yet a most careful search, made within a few hours after death, failed to disclose the presence of the fatal cause.

Writers differ widely as to the changes observed *post mortem*, and may not their difference be explained, in a manner, by the length of time elapsed since death?

Experiment 2.—Made incision down upon the femoral vein

of a smaller dog than the first one experimented upon. Into the vein was introduced the needle of an ordinary hypodermic syringe, and the air occupying the full length of the barrel of the syringe suddenly injected, and the animal allowed to go free. It gave two or three sharp barks, jumping forwards, and then sank to the ground, with mild convulsions of the extremities and very asthmatic respiration. The tongue and mouth were of a livid color, the cornea hazy, the peculiar sucking or gurgling sound issued from the chest, and the heart was in such violent action that it could be seen to jar the chest wall. This labored action of the heart and an occasional attempt at respiration continued over thirty minutes before all was still in death. Autopsy was made immediately; the right side of the heart was distended, and crepitated to the touch. On opening it the valves were found choked with the spumous froth, described by Erichsen and others. This froth, with blood and bubbles of air, extended far into the pulmonary artery. The lungs were not congested; the left side of the heart appeared normal; the vena cava was distended with blood, as were also the intestinal and cerebral veins. No air could be found in any of the other veins examined. In this experiment the quantity of air introduced was much smaller than in the preceding one, and it will be noticed that death was not so soon after its introduction. Although it produced immediate change in the action of the heart and the respiration, as in the previous case, its ultimate action on the nerve centers, as shown by the convulsions and coma, was not so sudden.

Experiment 3.—Made with the view of determining the possibility of introducing air into the circulation through the venous plexus, about sphincters of the bladder and *vagina*, by means of a firm aspirator needle thrust into the parts, in the manner in which it would be likely to be used in the aspiration of abnormal fluids. The pumping process, which appears to have been so fatal at Indianapolis, was applied, and operated with the needle turned in almost all directions. The deep connective tissue of the pelvis was injected with air until the integument became emphysematous, but no signs of disturbance in the action of heart or lungs appeared. It was ascertained during this trial that "pumping,"—that is, a to and fro action of the piston,—was not absolutely necessary in order to cause the injection of air into the tissues penetrated by the needle. It was found that simply lifting the piston and allowing it to fall, when the needle was obstructed so that fluid did not fill the vacuum caused in the cylinder of the instrument, would impel the column of air present in the flexible tube,

which connects the needle and cylinder, forward through the needle with sufficient force to distend the connective tissue of the entire pelvis; and if the canal in the needle should happen to be in apposition with an open vein, air in quantities large enough to cause immediate death would be driven into the circulation. In the experiment, the actual to and fro aspiration and injection properties of the instrument did not succeed in driving air into the circulation and causing its characteristic action, because the plexus into which the point of the needle was thrust was composed of veins even smaller than the calibre of the needle, so that it was impossible to inject them.

Experiment 4.—To further test the danger which might result from "pumping" or careless use of the instrument, a fourth trial was made. The point of the needle was withdrawn and thrust into a superficial vein of the thigh, and the vein compressed with the finger, so that blood could not be drawn into the aspirator; then the piston was raised and allowed to descend suddenly by atmospheric pressure. The air contained in the connecting tube was driven into the circulation, as shown by the convulsions, difficult breathing, and gurgling sound, which occurred almost immediately. The dog was dead in eight minutes. *Post mortem* examination was made at once. The right side of the heart was distended with blood; pulmonary artery contained some air, and crepitated somewhat differently from the crepitation peculiar to pulmonary tissue; left side heart appeared normal; pelvic and abdominal cellular tissue filled with air introduced through the needle during the previous trial in the venous plexus; lungs normal; thoracic and abdominal veins distended with blood; cerebral vessels also congested. In this case I may say that death was caused by the accidental introduction of air into the circulation through a superficial vein of the thigh during an attempt at aspiration.

Experiment 5.—A medium sized dog had the saphenous vein exposed, and with hypodermic syringe, a syringeful of air was driven slowly into the circulation, thirty seconds being consumed in the injection. Before the operation was finished the dog was seized with trembling, surface became cold, respiration difficult, and heart's action labored. Not a sound was heard,—contrary to the rule in the other cases; but the difficult breathing became gradually more difficult, until the heart ceased its action at the end of 15 minutes. Autopsy 24 hours after death: right side heart flaccid but not collapsed, contained frothy blood, bloody foam in pulmonary artery;

vena cavæ distended with blood; depending parts of lungs congested; lividity of mouth and tongue; aside from generally congestive state of the veins, all other organs normal.

Experiment 6.—Medium sized dog injected by hypodermic syringe full of air into the saphenous vein very slowly; one minute was consumed in driving it in. On releasing the dog, he acted for a few minutes as though nothing unusual had transpired, but finally began to stagger, as if weak in inferior extremities; dropped down; had dyspnœa and palpitation of the heart manifest to the eye; then came froth at mouth, and coma with continued dyspnœa, which lasted six hours, when coma disappeared, and dog attempted some voluntary acts; staggered, and appeared weak when trying to walk; refused food. Next day, palpitation and dyspnœa, though of less degree, still present, and dog appeared seriously sick; after several hours he drank a little milk, and has, up to time of writing (one week after the experiment), not recovered healthy, vigorous appetite; has cough and occasional vomiting, with the general appearance of a dog with a disabled and ruined constitution.

The experiments were all made during four days, and were performed on young and healthy animals.

I desire to say that I am indebted to Dr. Dayton Parker and students Wells and Schreiber, for their valuable assistance in performing the operation and making the autopsies. The symptoms have not been as carefully noticed as I would like to have them. Temperature I would like much to have observed and recorded; but I believe they have been sufficiently thorough to justify the following summary of facts, which I will present in numerical and alphabetical order:

I. The first experiment demonstrates, that when death results from the introduction of air into the veins, and an autopsy is not made until several hours after death, the air may have entirely disappeared. (*a*) Under such circumstances, if the death symptoms were unobserved, the real cause of death would remain unknown. (*b*) This disappearance of air from the veins might account for some of the sudden *deaths occurring in puerperal women, the causes of which are not made apparent by *post mortem* examination.

II. The "spumous froth" in the heart, mentioned by certain writers, is not usually found during *post mortem* examinations following the introduction of air into the veins. (*a*) The length of time between the introduction of air and the

*See Jenks on causes of sudden death in puerperal women.

post mortem examination may have much to do with the presence or absence of the froth.

III. The peculiar sucking, gurgling sound, mentioned by certain writers, is not likely to occur when the air is introduced slowly into the circulation. (*a*) It is usually present when the air is introduced suddenly.

IV. Dyspnœa, difficult and violent heart action, syncope, lividity of the mucous tissues, and coma, are symptoms invariably following the presence of air in the venous circulation.

V. The aspirator may cause death by introducing air into the veins when it is "pumped," or its piston allowed to descend by atmospheric pressure. * * * * *

Aspirators should be provided with a check valve at the mouth of the tube which communicates with the needle, then the accidental descent of the piston by atmospheric pressure would not endanger the driving of a quantity of air through the needle into the tissues in which it was imbedded. With such an appliance, the creation of a vacuum by the elevation of the piston would so rarefy the quantity of air present in the tube that some of it would occupy every part of the cylinder of the aspirator, and it would, when suddenly condensed by the accidental descent of the piston, close the check valve and prevent the momentum of the descending piston from communicating with the air remaining in the tube; consequently, none could be injected or pumped into the veins.

TWO CASES OF LYMPHADENOSIS, OR HODKIN'S DISEASE: WITH OBSERVATIONS.

BY G. K. JOHNSON, M. D., OF GRAND RAPIDS.

I lay before the Society brief histories of two cases of the disorder designated by the title of this paper.

Case 1.—Herbert Morse first observed a slight swelling on the right side of his neck in the summer of 1874. He was then 15 years of age, and had been previously healthy. He had not inherited, so far as could be ascertained, any morbid predisposition.

During twelve months after its inception the swelling increased slowly but perceptibly. After the lapse of that period it took on a more rapid growth, and other tumefactions appeared in the vicinity. A little later the patient began to look pale and to show signs of lowering health.

I first saw the case in October, 1876, a little more than two years after the first noticeable tumefaction. Many of the cervical lymph glands of the right side, both superficial and deep, were then enlarged. A few of the swellings consisted of single hypertrophied glands, but most of them were multiple, and presented the form of lobulated masses, the largest of which was then about the size of the fist. These tumefactions, large and small, and involving both deep and superficial ganglions, occupied the entire side of the neck, from clavicle to mastoid process. There were no adhesions to the integument, and the smaller swellings seemed to float loosely in the areolar tissue. Some of the larger masses seemed to have tolerably firm attachments beneath. There was neither pain nor morbid sensibility in any of these growths. They were elastic and moderately firm, but not indurated.

The solar print here shown presents quite faithfully the appearances at that time. I should add that this photograph was taken from a pencil sketch by Dr. Edie of Grand Rapids.

At no time were the lymph glands of any other external region involved. The spleen was a little enlarged. Its outlines were felt beyond the costal margins. The patient became cachectic in appearance, and this appearance grew more and more decided. From the beginning of the disease until within three months of the close the appetite was tolerably good, and digestion apparently but little or not at all impaired.

At no time did the glandular neoplasms tend to soften or suppurate; nor did the integument above or the tissue about them inflame. From the time the case came under my observation until within a few weeks of the finale, the temperature ranged from 101° to 102°. The patient suffered but little from pain, but was all along weak and incapable of any prolonged exertion. Epistaxes occurred two or three times during the illness. Pemphigus appeared over the body eight or ten months previous to the end.

The general ill condition grew slowly worse. The feet became edematous and the weakness extreme. During the last two or three months pyrexia was almost continuous, but with daily exacerbations, during which a hectic flush would cover the cheeks.

Death took place in January, 1879, four years and five or six months after the inception of disease. Circumstances prevented a *post mortem* examination.

Case 2.—James McK. is now six years old, and of healthy parentage. Twenty-one months ago a small swelling appeared on the right side of his neck. Three months previously he had been down with scarlatina, but recovery had been prompt and complete. The swelling, which consisted of a tumefied lymph body, has slowly gathered volume until now. Other glands in the vicinity have been invaded one after another, until at last the whole side of the neck, from the clavicle to the occiput is in possession of the abnormal growths. Some of the swellings are single; others are multiple and lobulated. One large mass is composed of the glands which lie between the sterno-mastoid and the trapezius, and is posterior to a line falling vertically from the lobe of the ear.

I present here front and back photographic views of these tumors. In this case, as in the first, the enlargements have an irregular outline, and an elastic, tolerably firm feel. But there is no distinct induration; nor is there any tendency to softening, suppuration, or caseation. The lymph bodies in

other external situations are apparently normal. The spleen is somewhat enlarged.

The appetite is variable, and there is some emaciation. The boy is pale, but there is yet no decided cachexia. His general health fluctuates, but is constantly below the normal point.

The thermometer generally registers 100° or 101°. During the past three or four months there have been several accessions of fever, during which the temperature would reach 102° and 103°. At present the boy is very slowly losing ground, both with respect to local and systemic conditions.

REMARKS.

These two cases are examples of a very interesting and a serious affection. Fortunately it is not of frequent occurrence. Practitioners, however, now and then encounter it, and are too often baffled by it. Too frequently its real nature and tendencies have not been recognized. The literature of the disease is scanty and fragmentary. Standard authorities, with one or two recent exceptions, give it no place. But during a considerable number of years past, journals and hospital reports, chiefly English and German, have recorded cases of the disorder and contained papers upon it. A few physicians, and notably Dr. Hodkin of England, have made its investigation a special work; and thus, little by little, we are coming to a knowledge of this important ailment.

Billroth—Surgical Pathology, Hackley's translation—discusses the subject in the chapter on Lymphomata. He thinks it difficult or impossible, in the present state of knowledge, to define the disorder with accuracy, and remarks that neither the gross nor the microscopic appearances have yet made clear the cause or the nature of this hyperplasia. The chapter evidently describes this particular affection; but I think it also blends and confuses it with some resembling but not identical disorders; for it is clear that there are cases of swollen and hypertrophied lymph glands, chronic in course, which differ in nearly all essential points from the morbid entity now considered.

Craigie—Elements of General and Pathological Anatomy—refers to this disorder in his paragrahs on Vascular Sarcoma of the Lymphatic Glands, but he does not distinguish it clearly from other affections of those bodies. Virchow refers to it under the title of lympho-sarcoma.

But the most satisfactory account of the malady yet in print, so far as I know, is the the monograph of Dr. Wm. R.

Gowers, in the fifth volume of Reynold's System of Medicine, recently published. Therein most of the existing knowledge of the subject is fairly summarized.

It must not, however, be inferred that the disorder always reveals itself in the form and in the situation taken by the two cases here reported. The hyperplasia does not always fall upon the lymph kernels of the neck. It may affect those of any region of the body. It seems, however, to display certain preferences. It falls most frequently upon the cervical glands; then upon those of the abdomen; then, in the order of frequency, upon those of the thorax, of the axilla, of the groin, and of the pelvis. My own limited observation inclines me to think that, after the neck, the abdomen is the most common site of the trouble. The lymph glands of the mediastinum, anterior and posterior, sometimes undergo this change, and expand into tumors which produce perplexing and distressing symptoms. It is probably safe to state that many of the anomalous and undiagnosticated tumors of the several cavities of the body belong to this category. It is certain that not a few of the tumors that originate in or encroach upon the abdominal cavity are of this nature. Not only the glands of the mesentery, but also those that lie along the spine and behind the peritoneum, from diaphragm to sacrum, are quite frequently thus involved. Every practitioner of considerable experience must have seen such instances. Several have fallen under my observation.

In one case, a gentleman 55 years of age, prominent in business and in public life, was ailing for eighteen months or two years. His symptoms were insidious and obscure, and no satisfactory diagnosis could be formed until towards the last. He had pains, sometimes slight, sometimes severe, in the abdomen and back. He slowly lost strength and flesh, and had sleepless nights. When under my observation, eight or ten months prior to death, the thermometer ranged 101° and 102° most of the time. He was pale and cachectic. His complexion, indeed, bore a marked resemblance to that of Morse, whose case is first above reported.

Autopsy revealed enlargement of the lymph glands of the abdomen. Chains of these bodies along the spine were expanded into tumors of various sizes. There was neither softening nor ulceration, nor suppuration at any point. I may add that towards the close of the case some of the cervical glands just above the clavicle became enlarged. With this exception, none of the glands in external situations were affected. I must further add, that for the facts of the autopsy

in this case, as well as for a part of its clinical history, I am indebted to Dr. Charles Shepard, of Grand Rapids.

In another case, a gentleman 41 years of age was out of health for several years, but was able to attend to business until three months before death. He suffered from obscure pains in the back and abdomen; at times the abdominal pains became very severe. The stomach was irritable, and food was frequently rejected. The patient often complained that his legs felt cold and unnatural, but there was never any paralysis. His complexion had the peculiar sickly look or pallor which, I believe, is always seen in this disorder after it has made some progress. There was weakness, but no perceptible emaciation. The external glands of the lymph system were not enlarged, nor were any internal swellings recognized during life. But on *post mortem* examination both the mesenteric and the lumbar glands were found in a condition of hypertrophy, forming lobulated masses of considerable size. They had generally a solid and firm feel, but there was one point of softening.

But the particular affection now in hand does not consist entirely, nor mainly, of the glandular hyperplasia. That, clearly, is a conspicuous and an important element in it; but the ill habit of body, the dyscrasia, the blood state, are factors at least equally important and quite as characteristic. In clinical history the latter are generally noted at a later period than the former; but it does not hence follow that they are the results of it. They are sequences, but not necessarily consequences of it. Probably such is merely the natural order of pathological development. If this view, which is that taken by those who have given most attention to the subject, be correct, it follows that we are to regard the glandular change and the systemic decline, not the former, as cause of the latter, but both as co-essential factors of the malady.

As already stated, this disorder has not generally been distinguished from some others having some resemblance to it, but which are pathologically distinct from it. Different observers and writers have also given to it different names, thus adding to the confusion which has prevailed with respect to it. Most of these terms have signified merely the glandular affection. But the term Lymphadenosis, or Hodgkin's Disease, more recently employed, is intended to designate the general, idiopathic disorder, of which the enlargement of some of the lymph glands and the ill habit of the body, as briefly described herein, are the notable symptoms.

Perhaps it is worthy of remark, that the lymph vessels are rarely or never involved.

Lymphadenosis is a chronic affection. Its duration is indefinite, but it generally runs on through many months or years.

It has undoubtedly been sometimes diagnosed as struma, and the swellings as strumous. But such a mistake ought not to be made, since the distinctions are so marked. The history and signs of the strumous diathesis are in general easily made out; besides, strumous swellings are at first harder than those of Hodgkin's disease, and are never so elastic. There is also and always this specific difference: strumous swellings soften and suppurate or caseate; in the swellings of lymphadenosis this never occurs.

The only other disorder with which this is likely to be confounded is leucocythæmia (leukæmia). Between these two affections there are doubtless some analogies. Some observers have, indeed, regarded them as cognate affections. Both profoundly involve the structure and the hæmatosic functions of some of the lymphoid glandular bodies. In both serious blood changes occur; yet, between a typical case of lymphadenosis and a typical case of leucocythæmia there are unmistakable differences. In the latter, the blood change, *i. e.*, the enormous increase of the white corpuscles and the diminution of the red, is more marked. The anæmic look of the patient is consequently more pronounced, and hemorrhagic transudations, internal and external, are more frequent. In the latter, also, the spleen undergoes very great enlargement, while the lymph glands are but little or not at all changed.

Prognosis is not encouraging. But few recoveries are of record in cases in which the diagnosis was clear. We may hope, however, that the increased attention the disease is now receiving, and the better knowledge of it which will ensue, will finally lead to more successful results.

Treatment resolves itself into surgical and medical. When the tumors occupy accessible situations, as in the neck, the axillæ, or the groin, excision naturally suggests itself, and it has been many times practiced. In most instances of excision there has been no real arrest of the progress of disease. The general distemperature has gone on without check, and other glands have, after a variable time, taken on the hyperplastic action. In a certain number of cases, a temporary improvement, continuing one or several years, has followed. In a few instances, if we may assume that the diagnosis was correct, cures have resulted; at least the patients remained well so long as they were under observation. But surgical opinion

is not fully settled on the question of excision. In the present state of knowledge, perhaps the best rule of practice is to extirpate in cases in which the constitutional condition is yet good, and in which, in a surgical view, the operation is entirely feasible. Morse, whose case is here reported, consulted eminent surgeons in New York and elsewhere, but no one advised operation.

Of drugs, arsenic, cod liver oil, and the preparations of iron and of iodine, have been most relied on. I have found the muriated tincture of iron a good remedy. In doses of two or four drops, three times a day, well diluted and long continued, it has, in my hands, improved the general condition. But it exerts no control over the tumefactions.

My purpose, however, is not to discuss treatment, but rather to draw attention to an important disorder of which too little is known.

HOW WE HELD THE PERINEUM FORTY YEARS AGO.

BY A. F. KINNE, A. M., M. D., OF YPSILANTI.

My wife came to her first confinement during the second year of my practice, Sept. 20th, 1842. I had read medicine in the office of the late Dixi Crosby, M. D., LL. D., Professor of Surgery in Dartmouth College. The late eminent gynicologist, Edmund R. Peaslee, and the late talented Professor Alpheus Benning Crosby, and myself, I have the honor to say, were fellow pupils, and at one time occupied adjacent rooms in the doctor's house. And it will readily be conceded, I think, that the school where such men as these were trained must have been a good one.

My patient was healthy and well formed, and the case afforded only one point of interest: the perineum, without exception, was the most difficult one that I have ever been required to take care of,—owing to a large head and a somewhat deficient dilating capacity combined. Of course, it would be difficult to conceive of a case calculated more decidedly to enlist my sympathies than this. It lasted ten hours; as the critical time approached, and as the perineum became thinner and thinner,—fearfully thin,—and seemed at every moment to be upon the point of bursting, my sense of responsibility and my anxiety knew no bounds. I felt the need of assistance. I would have given both my horses to see my dear old preceptor walk in; but my home then was upon the southern foot-hills of the Grand Monadnock, sixty miles from him. I had no immediate neighbors, and was obliged to rely upon myself and do the best I could; and I succeeded better than I feared. I watched the perineum and I held it. I took particular care of the part where the laceration must commence,

if it could not be prevented; and after a time, which seemed interminably long, but which I know was not unreasonably so, I had the satisfaction of finding that the head was born, and the perineal tissues left unharmed.

You have all of you known how a young physician feels upon the successful termination of his first difficult case. I was triumphant! I was jubilant! But what was my surprise and chagrin the next day, when my patient showed me that the right labium was torn quite in two, just below its middle.

Is there another case like this upon the record? If there is I have not seen it. The accident must be a rare one, at any rate.

Well, my learned brothers, what will you say to this? Did I commence holding this perineum too soon? and did I defend it too faithfully? I have tried this question in the light of a later experience many times, but have never yet been able to convince myself that I did.

But, says my objector, your patient suffered a rupture of one of the labia; how about that?

I admit that she did; and though I did it unwittingly, I admit also that I was, myself, the cause of it. And I must go further than this: whenever I have cases similar to this, I shall endeavor to treat them in a similar way. In other words, if in any case there seems to be danger of a perineal rupture, I shall permit that tissue to dilate and watch it narrowly; and as soon as my touch tells me that it is dangerously thin, and that it cannot safely be permitted to dilate further, I shall apply pressure to it, *secundum artem,* and prevent its further dilatation, if possible; and at the same time, and with the same hand that holds it, I shall carry the whole perineal band bodily backwards, very gently and gradually, little by little, as the pains recur, over the advancing head,—just as if a rupture of the labia was not an accident to be feared, as, indeed, it is not.

Churchill teaches* that this backward movement of the perineum must never be practiced; but the reason which he gives for the prohibition,—that such a step would endanger the integrity of the perineal substance,—shows that he and I are contemplating two very different maneuvers. To hook the tips of the fingers over the edge of a distended perineum and endeavor to draw it backward over the head, would manifestly be a dangerous procedure. And this is what Churchill forbids. My maneuver, on the other hand, is a compound one, having two steps

* Churchill's Mid., pp. 218 and 476.

in view, conducive to a common end. I support the perineum in the usual manner by applying the tips of the fingers to the weakened anterior border of it, with the rest of the hand extending backwards over its body, and by pressing the whole perineal substance backwards together, I force a dilatation of the labia and make room for the advancing head. And I have never seen any harm from the practice of this procedure in thirty-seven years, and no harm resulted in the case which I am reporting. For, in the first place, the labia cannot be easily ruptured. I have never been able to repeat the accident of 1842, although I have had many cases seemingly about as difficult as the one here reported. And, secondly, the rupture of a labium is, comparatively, by no means a serious accident, for the divided parts readily coalesce; coaptation takes place almost, or quite, spontaneously; the adhesions are not disturbed by defecation or micturition, and the resulting cicatrix is of no consequence.

Some writer has said that a laceration of the perineum, to a greater or less extent, is the result in almost every primiparous labor. And if we notice how frequently this structure is brought to us for repairs, we shall have to admit that there is too much truth in this remark. But it is not true from necessity. On the other hand, malformations and cicatricial cases excepted, I am willing to leave it as my belief, that a rupture or a laceration of the perineum is almost never an unavoidable accident.

June 12, 1879.

REPORT OF COMMITTEE ON CHARGES PENDING IN THE AMERICAN MEDICAL ASSOCIATION.

Mr. President and Gentlemen:

The undersigned, who were appointed by this Society at its last annual meeting, held at Lansing, to defend the charges made against this Society at the meeting of the American Medical Association in Chicago, 1877, for "irregular and unethical conduct," and referred to the Judicial Council of that body for action at its meeting in Buffalo, in 1878, respectfully report, that they attended the said meeting in Buffalo, and the Judicial Council, after consideration of the said charges, reported that "there was no clause in either the constitution, by-laws, or code of ethics, as they now exist, under which the charges against the Michigan State Medical Society can be sustained and adjudicated." Dr. J. R. Bronson, of Massachusetts, then offered the following preamble and resolutions:

WHEREAS, By the report of the Judicial Council, submitted this day, we are informed that the ethical code of this Association is imperfect, in that it does not recognize by its letter a conceded violation of the spirit of our profession in its relation to irregular medicine; therefore

Resolved, That said Council be instructed to submit to the Association at this meeting for its consideration, an amendment covering this omission.

This was referred to all the members of the Judicial Council as a committee.

The Judicial Council, as a committee, reported the following amendment and addition to paragraph 1, Art. I., of the second division of the code of ethics, under the general heading "Of the Duties of Physicians to each other and to the Profession at large," and the special heading, "Duties for the Support of Professional Character." The same, when finally adopted, to be added at the end and to constitute a part of paragraph 1 of Art. I., as follows:

"And hence it is considered derogatory to the interests of the public and the honor of the profession, for any physician or teacher to aid in any way the medical teaching or graduation of persons knowing them to be supporters and intended practitioners of some irregular and exclusive system of medicine."

This being an amendment to the laws, it was laid on the table until the next meeting.

At the recent meeting of the A. M. A., held at Atlanta, this amendment to *the code* was taken from the table, and after an exhaustive examination into its merits by Dr. Dunster, a delegate from this Society, it was, on motion of Dr. Pratt, laid on the table for one year.

W. BRODIE,
H. O. HITCHCOCK,
Committee.

ON MORAL INSANITY.

PAPER READ BEFORE THE CLINTON COUNTY MEDICAL SOCIETY, AT ITS JULY MEETING, 1878, AND REPORTED TO THE MICH. STATE MEDICAL SOCIETY, BY SIMON HERRES, M. D., WESTPHALIA, MICH.*

In 1842, the meritorious English physician, J. C. Prichard, published a pamphlet "On the Different Forms of Insanity with regard to Jurisprudence," in which, with reference to his remarks on insanity, he describes in his sixth chapter a form of partial insanity under the name of moral insanity (with the Germans, Moralischer oder Sittenwahnsinn). He defines it as a physical disturbance, whose symptoms manifest themselves exclusively in changed modes of feeling, emotions, and dispositions, and in the habits and behavior of the individual, or in those physical capacities which are commonly denominated as the moral power and the physical force of will. We cannot therein discover any illusion or hallucination, nor a perverted conviction similar to the delusive and false impressions which characterize monomania. That this state of disease is frequently the consequence of a considerable injury acting on the brain or the general state of health; that it became obvious by the strange change in the character: if, *e. g.*, a man of a quiet and phlegmatic disposition, who is seldom subject to strong emotions, in a short time shows an irritable, quick, passionate, inconsiderate, extravagant disposition, then this sudden change confirms the suspicion of such psychical disturbance. The characteristic is always the mental depravation with the want of every intellectual disturbance."

Prichard bases the assertion of this form of disease on a number of observations, and he obtained the endorsement of

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*The writer of this paper is largely indebted for ideas contained in it to Dr. Flemming, of Schwerin, Germany.

several English and American physicians, as Hitch, Wake, and Woodward. The latter, moreover, affirms to have found at least one-fourth part of the inmates of the Massachusetts Hospital as belonging to this species.

Since then the recognition of the above named form of partial psychical disturbance became naturalized not only in the English and American psychiatry, but also on the Continent. The comprehension of the same simultaneously clothed itself in indistinctness, and the extent of its limits gradually became so indefinite and uncertain, that, as will be seen, a considerable confusion in the distinction between crime and insanity thereby threatens to be produced. It, therefore, seems to be time to examine a revision of the facts from which that idea is derived, to more definitely and firmer determine it, and to lead it back to its proper limits.

Although Prichard, as already stated, distinguishes and excludes moral insanity from monomania, French and Belgian physicians have, nevertheless, unhesitatingly drawn him into this idea, which, since Esquirol, had been current with them. Prichard already, in appealing to Georget, with whom he finds moral insanity among the forms of monomania, mentions the statement of this writer: "That there are patients with complete corruption of the moral feeling, who in all mental emotions, even in anger and rage, do not show any perversion of sense and judgment whatsoever." But he there overlooks the further statement of the French physician (although he himself gives it), that the patients in question generally falsely consider themselves the victims of arbitrariness, and of hostile, fraudulent, or vindictive intrigues,—which does not at all concur with the assertion of an uninjured intellectual power, and power of judgment, moreover, undoubtedly appertains to the idea of delusion of persecution.

Later, other French and Belgian physicians, as Marc, Leuret, Ferrus, and Guislain, more decisively numbered moral insanity with the monomaniæ. This idea, which, at the same time designates a partial intellectual perversion, and a perversion of the faculty of feeling and a power of desire, is, as is well known, of unusual ductility. It is usually applied to all those disturbances of equilibrium of psychical activity, which, in a peculiar direction, principally lead the perceptions or thoughts and the will or energy to perverted acts,—acts or deeds in contradiction to reason or laws. In proportion to this predominating direction and the actions emanating therefrom, quite a number of different monomaniæ were, as is known, entered on the index of partial psychical disturbances;

e. g., homicidal monomania, suicidal monomania, pyromania, kleptomania, erotomania, etc. Whilst gradually, especially with the French physicians, this idea so much extended that there was already an inclination to ascribe each eccentricity of disposition and desire, all the so-called "suchten" (maniæ, inordinate desires, *e. g.*, the mania to buy books or paintings), to a monomania, we were reminded, more particularly by the exhortations of lawyers, that just this idea every time presupposes an intellectual disturbance from which the eccentricity of disposition and desire must first emanate if it shall receive the name of a morbid or monomaniac one.

This restriction, however, has always predominated with the German physicians, who, in judicial psychology ever strictly maintained that also in an unusual action, especially in an illegal one, no matter how unexpected, isolated, and unestablished by motives it may enter into appearance before it is made evident as belonging to a psychical disturbance, this psychical disturbance without regard to that action, be also otherwise proven, and that at the same time the becoming sick of the whole being within the reach of the physical as well as the psychical life be made known. Offenses against decency also, no matter how heinous they were, were submitted to this demand. Even then, when by the difficulty to perpetrate them, the proceedings sometimes were somewhat loose. With the Germans, nevertheless, the idea of "moral insanity" subsisted, though not in the nosological system, yet in practice. But it became,—the same as the *mania sine delirio*, advanced by Pinel and largely contested,—a collective or commonplace idea, in which everything belonging to psychical disturbance which eventually could not be brought in those forms in which a disturbance of the mental activity (delusive conceptions, delirium), and the probability of an injury to the vitality of the brain could not be ascertained, found its place. Thus great diversities were united in this form of disease, and did not seldom have to serve as an aid for the real form which did not present itself for the given case.

There are especially the following kinds of morbid psychical conditions which partly urged themselves into the idea of moral insanity, or which were partly urged into it:

1. Prodromatic stages of insanity. It is known that among the first symptoms of a commencing mental disturbance, we have changes in the disposition of the mind, at a time when the mental activity does not show the least injury; when, moreover, reason still is somewhat sharp in the excuse or justification of the expressions of these changes of disposition.

The usual disposition of the affected here mostly verges into the opposite in such a manner that not only the disposition, but even those influences which it exercises on the activity of perception, on the judgment, and on all the principles of acting,—that consequently the character of the man undergoes a change. Thus, undoubtedly as a consequence of morbid changes in the physical life, gentle and patient men become irritable and passionate, joyful and social ones sad and cautious, prudent ones indiscreet, peaceful ones quarrelsome, saving ones extravagant, *et vice versa.* Like all chronic morbid processes, these changes matured sooner in the one, later in the other, with gradual and frequently unnoticed transition. It is, therefore, not at all surprising if in the latter case the attendants of the patient anticipate the real danger in which he really is so much the less, the more the strangeness which becomes evident in his behavior is limited to his moral behavior, and the less the intellectual functions partake in it. Thus it may happen that a man who is threatened with psychical disturbance may without annoyance follow out the duties of his professional employment in the intercourse with his fellow citizens for weeks, and even months, whilst his moral behavior at first causes surprise; later, when it becomes intolerable for his associates, even suspicion of a morbid state, which, however, so long as no insane appearances present themselves, is regarded as morbid moral aberration, as moral insanity. It is worthy of remark, that among the cases which Prichard mentions in affirmation of this species, the very first belongs to this category. A produce dealer, *aet.* 40, went through a prodromatic stage of the just mentioned kind of 12 months, towards the end of which he already performed the queerest acts before he was handed over to medical treatment and regained his health. But no one who is at all acquainted with the observations of persons psychically affected, will, upon reading this observation, deny that the patient in question at this moment was near the outbreak of complete mental disturbance, and probably *dementia paralytica.*

No less belongs here the second case mentioned by Prichard, of a seven-year old girl, who, during the protracted prodromatic stage (the duration of it is not given), could not resist a violent destructive impulse, at the same time excusing her behavior with the confession that she felt that she was insane. In a third case it remains doubtful, in the criticism of the expert reader, whether it must mostly be classed with the circulatory insanity or with dipsomania.

2. A great number of the "Triebkrankheiten" (disease of impulse), inclusive of raptus or furor melancholicus and mania subita or acutissima; those sudden commotions of the power of emotion and volition, emanating from a morbid condition of the nervous system, which appear with such violence that the activity of understanding and reason exercise no control over it, and the power which makes the only desire to will, can no more gain over it. Understanding and reason are thereby not only disturbed, but, moreover, overcome; therefore, the patients, as soon as they again recover their consciousness, do not comprehend how they came to perform the fearful excesses in their manner of acting.

Hardly to be separated from this group are—

3. Those cases of disease which Pinel called *mania sine delirio*, Reil, rage without perversion of reason, which Henke, however, classes with mania intermittens, or with iracundia morbosa (excandescentia furibunda). The latter essentially ranges here; but the morbid commotion extends at the same time, and in such a way, to the mental faculties, that its performances verge into confusion, and delirium occurs, which renders insanity evident.

In general every form of psychical disturbance has the more expectancy to be ranged with the idea of moral insanity, the less under the appearance of clouded psychical activity a degeneration of the mental activity occurs, and the less we thereby see and observe insane appearances and delirium. Therefore, even imbecility, in which yet a remnant of the mental faculties has remained intact, but the desires attained an overwhelming reign, can now and then be regarded as moral insanity; the same as the annals of criminal psychology show isolated cases of moral brutality, which, properly speaking, belong to imbecility.

It must, however, not be overlooked, that as we can never point out in an insane person a completely isolated, fixed idea, beside which all other mental functions act normal, so also can the depravation of disposition not exist for a longer period without throwing a shadow on the moral behavior of the mental activities.

Dr. Flemming of Schwerin, during a long career as physician for insane persons, has only observed one case which may be brought up to prove the existence of moral insanity, though he is not certain whether it appertained to the complete case of disease or only to a certain stage of its course. He further relates the case of a very intelligent physician, who had

already been treated in several asylums for a mental disturbance, of the early course of which he could not ascertain distinct facts, and which later ended by death,—who presented for several months during which time he was under his treatment, notwithstanding frequently complaining of auditory hallucinations with weak hearing, no other abnormality of his psychical functions than to irritate other persons in order to enjoy himself. He was inexhaustible in experiments to achieve this, and he even made the greatest lies aid his purpose. He incessantly accused the waiters of not fulfilling their duty,—he even tried to induce them to neglect it; he pursued decent women with obscene language, etc. Whenever the Doctor reprimanded him, he fortified himself behind his difficulty of hearing, and expressed his sorrow for not understanding him. If he, however, succeeded in bringing him to express his indignation, he gave free vent to his insult with the utmost pleasure, that the Doctor before a patient could so little control himself and his passions.

Besides some other causes, the great extension of the idea of moral insanity certainly has great part in the fault that in modern times the surprising notion has gained ground with some physicians, that this form of disease rests, if not in all who have perpetrated an offense against the moral law, at least in all those who oftener and again, almost habitually, perpetrated such offenses. It is yet explainable, when the physician of a Scottish penitentiary, filled with malefactors of all kinds and of the worst,—when Bruce Thomson comes to the conclusion that a great part of these sworn enemies of human society, who after repeated satisfactory punishments again committed the same offenses, and who showed no sign of sting of conscience, and no contrition over the misdeeds which they perpetrated and over the harm they have afflicted to their fellow men,—that they had become victims of a complete degeneration of the moral feeling, victims of a "moral imbecility." It may not surprise if this physician, under the influence of such appearances, allows himself to presuppose in the sharpest habitual thief, as also in the most brutal client convicted of murder, a morbidly conditioned annihilation of the moral sensations, which renders these criminals more worthy of pity than of despise and hatred.

It is, however, stranger to hear one of the most eminent physicians of England, Henry Maudsley, plead for such an extension of the idea of moral insanity, in his essay on medical psychology, delivered at the opening of the psychological

section of the British Medical Association at Birmingham, August, 1872. After a spirited survey of the course of development of psychology and psychiatry, the speaker lays stress on the necessity to observe the relations between crime and insanity. In the frequent occurrence of the same in the same family, in the frequency of insanity and epilepsy in penitentiaries, and in the extinctness of moral feeling in criminals which we can observe in them, the speaker finds the proof, that the same as the spirit, the moral feeling, conscience, is bound to a definite anatomical organ, and with it can undergo a morbid process for itself. He refers to facts, and mentions a number of examples which shall not only prove the close, but also, at the same time, the organic relation of crime and insanity; of families in whom, beside great criminals, there were also lunatics, epileptics, and suicides; even of such in which a criminal father became the progenitor of a partly criminal, partly insane descendence. He concludes from these facts: that in many cases the crime only is followed by the results of a "neurosis," and that the descent from a family inflicted with insanity very frequently is followed by the want of the moral sense, a moral weakness of mind, an inborn defect, which, like spintherism, again renders the moral conditions of life insensible. No matter how willing we are to recognize a connection between crime and insanity,—there are geographical maps according to which the frequency of both nearly falls together,—it must not be forgotten that the causes of both aberrations of human nature are to a great extent the same, but that it would be premature, therefore, also to consider the nature of both the same. We must, therefore, refrain from following the speaker to consequences leading so far, and which question the distinction between insanity and crime, and the right of the state to punish the latter.

As long as in physiology a particular organ for moral sense and conscience is unknown,—we must hold to the axiom of the solidarity between spirit and mind,—we might regard the will as the result of their mutual coöperation. We are justified in believing that not any single part of the soul, as perhaps the feeling for right and wrong, can for itself become sick; that, moreover, there, where this feeling has been extinguished by disease of the nervous system, the complete psychical life is affected by this disease, even when the latter preferably appears in isolated ranges of the psychical activity, for that axiom alone justifies the distinction of such acts, which after free self-destination by recklessness or resist-

ance against the prohibition of reason, decency, and law, are incurred by such who emanate out of impotence to obey this law, caused by disease. The idea of moral insanity as a peculiar species of disease thus drops; in its place remains a mental disturbance with prominent symptoms of perversity in the domain of the power of desire (volition).

According to my view it would be advisable to banish this idea, as also that of partial insanity, from the pathology of the psychoses completely.

CLINICAL NOTES OF TWELVE CASES OF OVARIOTOMY.

BY DONALD MACLEAN, M. D., PROFESSOR OF SURGERY, UNIVERSITY OF MICHIGAN.

Case 1.—Mrs. S. B., of Benton county, Iowa, called upon me April 25th, 1877. Her age at that time was 29 years. She had been two years married, but had never conceived. Had always enjoyed good health until about the time of her marriage, when a tumor was discovered in the right illiac region; at the same time symptoms of pelvic irritation were complained of. After marriage the tumor grew rapidly, and all the characteristic phenomena of ovarian disease became well marked, and had continued up to the time of her coming to Ann Arbor. The operation of paracentesis abdominis had been performed four times; the last, ten weeks before leaving home. The first tapping was followed by marked relief to all the symptoms; the subsequent operations with only partial reduction of the tumor, and with the effect of setting up severe and dangerous attacks of peritonitis. From the date of the last tapping, patient had continued to suffer greatly from abdominal pains and digestive derangements. The cyst had filled rapidly and was soon larger than before. The abdomen at the most prominent point measured 44 inches in circumference; the tumor filled the whole cavity, interfering seriously with respiration and digestion. The characteristic emaciation of face, neck, and thorax was particularly well marked. Immediately on her arrival in Ann Arbor, Mrs. B. was directed to observe a carefully regulated course of preparatory treatment, namely: moderate out-door exercise, mild laxative medicine, and a diet of oat-meal porridge with milk, soups, and other

nutritious and easily digested food. In spite of this simple regimen the pulse was always rapid, varying from 110 to 130 per minute, and the temperature was never less than 100 degrees F.

On May 7th, with the able assistance of my colleagues, Dunster and Frothingam, together with Prof. Noyes of Detroit, Dr. Ewing of Dexter, G. W. King, now of Kempton, Ill., and my brother, Dr. A. C. Maclean, who administered the anæsthetic, I performed ovariotomy. The usual incision, four inches in length, was made in the linea alba. A good deal of ascitic fluid was met with; the cyst was found adherent to the abdominal wall at various points, and the great omentum was firmly attached to its anterior surface. Notwithstanding the exercise of all possible care and gentleness in the separation of the adhesions, rupture of one or more large cysts into the abdominal cavity occurred, and this was especially regretted, from the fact that the effused fluids were largely composed of pus and other inflammatory products. Hæmorrhage from the torn omentum and the adherent surfaces was very free, and 18 ligatures were required to arrest it. These were of fine silk, and were all cut off short. One adhesion of extraordinary thickness and vascularity passed from the left side of the tumor to the left illiac fossa, resembling a pedicle in appearance. This adhesion was treated as a pedicle, *i. e.* it was ligatured securely and divided. The pedicle of the tumor was moderately long, and was easily secured by transfixion with stout silk ligatures, saddler's twist, four-ply thick, well waxed and twisted. The left ovary was found to be cystic, and was also removed. The ligatures of the pedicles were cut off short, and the stumps dropped back into the the pelvis. The whole mass weighed, as nearly as could be estimated, 50 pounds. The greatest expenditure of time in the operation was in sponging out the extravasated pus, blood, and other matters from the peritoneal cavity. This was done with the utmost care and thoroughness, after which the wound was closed with silk sutures passed through the whole thickness of the abdominal wall. A glass drainage tube was inserted between the two lowest stitches, the one end of which lay in Douglas' cul-de-sac, and the other protruded on the external surface. This tube was plugged with cotton saturated with carbolic acid. The whole operation was carried out under the carbolic spray, and in an atmosphere heated to 90° F. The external dressing consisted of, first, pads of fine white sheet wadding carbolized, evenly disposed over the anterior surface of the abdomen; second, strips four inches broad of Maws'

moleskin adhesive plaster passed completely around the trunk of the body, and lastly, a strong flannel bandage extending from the axillæ to below the trochanters. These dressings having been applied, the patient was placed in bed, having been two hours and a half on the table. The usual means were taken to counteract the effects of the shock, which, as we had fully anticipated, were very severe. Hot bottles were applied to the feet and other parts of the body, while brandy and ammonia were administered internally as soon as the patient was able to swallow. It was not until 3 A. M. on the 8th that the pulse could be felt distinctly enough to be counted. It was then 140; temperature 98½°. At 11.30 A. M. on the 8th, pulse 120; temperature 101. Brandy and iced milk were given in small but frequent doses. For the first three days patient suffered very much from nausea and vomiting. These symptoms were at last arrested by a hypodermic injection of morphia, administered during my absence by Prof. Frothingham. The dressings were not disturbed until the evening of the third day. At this time the temperature was 103½°, and the pulse had become so rapid and small as to be uncountable. The face was livid, breathing oppressed, surface of body suffused with clammy perspiration; in short, all the symptoms of approaching fatal collapse. The flannel bandage was then unpinned, the adhesive straps slit up with scissors and reflected, the cotton sheets taken away, and the plug withdrawn from the glass drainage tube. This done, a discharge occurred through the tube of sanious sero-purulent fluid in quantity so great as to deluge the patient's clothes and bed. When this discharge had ceased to flow, I passed the small tube of the stomach pump through the glass tube into the peritoneal cavity, and thereby pumped water heated to 100°, and containing carbolic acid one part to 40, with a little chloride sodium, until all appearance of pus and blood had vanished, and until the water flowed back clear. In an hour from this time the bad symptoms had entirely disappeared, and the patient felt better than she had done since the operation; pulse 112, temperature 100¼°. From this time the case made rapid progress. The peritoneal cavity was syringed out in the manner just described twice every day. The bowels were moved by enemeta for the first two or three times, after which they moved naturally. The digestion gradually improved, and the dietary was enlarged and varied to suit the appetite. On the 21st day after operation the patient left Ann Arbor and went to visit friends at Wayne, Mich. The glass tube was finally withdrawn about this time, but the

stomach pump was still used to wash out the peritoneal cavity twice daily. On the 24th day the end of the largest pedicle, with the ligatures attached, floated up through the tube, and was removed. On the 32d day the same thing occurred with the ligatures applied to the left ovary. Not one of all the other ligatures was ever seen or heard from in any way whatever. The discharge from the opening now ceased entirely, and the opening closed of its own accord. On the 49th day the patient started alone on an extended tour to the east. In the fourth week after the operation she weighed 99 pounds. Her weight now is 165 pounds, and she is in better health than ever before. Fifteen months after the operation this patient had menstruated eight times, and has continued to do so regularly.

Case 2.—On the 21st of May, 1877, at Adrian, Mich., I met Dr. Chas. Rynd, and drove with him eight miles in the country to see Mrs. A., aged 42, who was suffering from an ovarian tumor of four years' growth. The patient was very much emaciated, and nearly exhausted by the long-continued irritation of the tumor, which was far advanced in the third stage, and was large enough to completely fill the abdominal cavity and press upwards the thoracic viscera. Otherwise her health seemed to be good. The outline of the cyst was very uniform, and the fluctuation could be felt distinctly in all directions, and as there were no evidences of adhesions we regarded the case as a favorable one for operation, and appointed the next day for its performance. Drs. Rynd, Allen, Todd, Stephenson, and Smart, of Adrian, and G. W. King and A. C. Maclean being present, the latter giving chloroform, the operation was commenced at 11 A. M., May 22d, 1877. A small abdominal incision was made, the cyst tapped with a Wells' trochar, and the collapsed sac drawn through the small opening,—the whole mass, cyst and contents, weighed 35 pounds. The pedicle was long, and easily tied, the ligatures being cut off short and the stump dropped back. No fluid escaped into the peritoneal cavity. A glass drainage tube was inserted, and the wound was stitched up and dressed as in the previous case. There was comparatively slight shock, and the reaction was equally mild. The further history is simply that of rapid and uninterrupted recovery. The pulse never rose above 100, nor the temperature above 101½°. The wound healed by first intention, and the stitches were removed on the fourth day. The drainage tube was removed on the seventh day, having done neither good nor harm. In about two weeks from the date of opera-

tion this patient drove in a buggy to her home in the country, and when last heard from, a short time ago, was in the enjoyment of excellent health and spirits.

Case 3.—Mrs. T., aged 42, of Oakland county, married for several years, had never been pregnant; had been conscious of having an ovarian tumor for upwards of 20 years, and had suffered a great deal of inconvenience from it, and much pain at times. Latterly the tumor had become an insupportable burden, and the patient had determined to get rid of it at all hazards. The cyst had been tapped several times; the last, seven years ago. The circumference of the abdomen at the most prominent part measured 62 inches. The outline of the tumor was remarkably uniform, and fluctuation could be distinctly felt, although only in certain directions. Adhesions were very strongly suspected, but owing to the immense size of the tumor and the thickness of the abdominal walls it was impossible to obtain definite information upon this point before operation. The uterus was normal in size and position. September 13th, 1877, I performed ovariotomy for this patient, Drs. S. Wade of Holly, Lindley of Highland, Caldwell of Fenton, Hagadorn & Johnson of Milford, being present and assisting; also Dr. G. W. King and A. C. Maclean, who accompanied me from Ann Arbor, the latter administering the anæsthetic (ether). The usual incision of four inches was made, and many large cysts tapped and emptied. It was found necessary to enlarge the incision to seven inches before the collapsed mass of cysts could be extracted. The tumor and contents weighed 107 pounds. A coil of small intestine was found closely adherent to and surrounding the pedicle, requiring cautious dissection for its removal. The adhesions to the abdominal walls were somewhat extensive, but were not strong enough to give any serious trouble in their management. The pedicle was short and very broad, but was ligatured by transfixion, and the ligatures being cut off short the stump was dropped back into the pelvis. The wound was closed and the usual dressing applied. Patient rallied from the shock remarkably well. At 8.30 P. M. the pulse was 120, full and soft, and the temperature 100° F. Patient slept comfortably that night, felt well and in good spirits the next morning. At 7 A. M., pulse 100, temperature 98½°; no pain nor tenderness of the abdomen; continued well during the day. Evening, pulse 130, temperature 101¼°. At 10 P. M. one quarter grain of morphia was given hypodermically, after which she slept well. Sept. 15th, 6 A. M., pulse 100, temperature 98½; hopeful and free from pain, the only disagree-

able symptom being eructations and nausea, to which she had been subject for a long time previous to operation. On the evening of the 15th, pulse 130, temperature 101½°; dressing removed and peritoneal cavity washed out with the usual solution, after which patient rested very comfortably. September 16th—6 A. M., pulse 100, temperature 98½°; feeling very well, although regurgitation from the stomach continues; peritoneal cavity washed out as usual; evening, temperature 102°, pulse 130. Sept. 17th—No material change, except increased degree of nausea and regurgitation of contents of stomach. Sept. 18th, 5th day—Vomiting very annoying and symptoms of prostration well marked; hydrocyanic acid given internally in one-drop doses, with the apparent effect of arresting vomiting for a time; milk and lime water constituted the principal diet; menstruation commenced on the afternoon of this day. 19th Sept. 6th day—7 A. M., pulse 120, temperature 98°; patient had a good night, slept well; looks better and feels hopeful again, though somewhat exhausted; a turpentine enema brought away a large quantity of flatus; hot poultices were freely applied to the abdomen. Evening memorandum—Pulse 120, temperature 98°; has had a comfortable day. 20th, 7th day—Patient feels and looks well; takes beef tea and milk; occasional relapses of vomiting and nausea. 8th day—No change; patient feels comfortable and hopeful. 9th day—A good deal of vomiting and prostration; peritoneal cavity washed out, although there was hardly any discharge. 10th day—Vomiting very frequent and exhausting; pulse 130, temperature 98°; food and stimulants administered very freely by the rectum, but the prostration continues to be very great. 11th day—Vomiting almost constant; prostration greater than ever before; died at 4 P. M.

Post mortem on afternoon of same day, a few small patches of inflamed peritoneum were noted; the pedicle was covered with a thin layer of inflammatory lymph; there was no fluid in the peritoneal cavity, and the peritoneum and bowels as a whole presented to superficial observation nothing abnormal, except a slight degree of increased vascularity. The small intestine presented three or four very remarkable constrictions, looking as if a ligature had been tied tightly around it at these points, and between these constricted portions the intestine was dilated into enormous pouches, which were filled with fluids and food more or less completely digested. The stomach was much dilated and hypertrophied. The other organs were quite healthy so far as we had time or opportunity to examine them.

Case 4.—In May, 1877, Dr. Alvord, of Clinton, Michigan, asked me to see Mrs. B., aged 45, married, and the mother of several children. This patient was suffering from, first, carcinoma of the breast with enlargement of axillary glands; second, complete procedentia uteri, and last, but not least, a multilocular ovarian tumor well advanced in the third stage of its development. Accompanying this serious catalogue of complications, there was the characteristic emaciation of ovarian disease, together with all the usual symptoms of derangement of the digestive apparatus; at the same time the patient appeared to be possessed of unusual vitality. She felt anxious to live and to be relieved of her distressing complaints if possible. Her brave, hopeful spirit, her bright, clear complexion, and total freedom from any appearance of cachexia, induced Dr. Alvord and myself to believe that operative interference might not after all prove so hopeless as at first sight appeared. Accordingly, on May 29th, 1877, with the assistance of Dr. Alvord and Dr. G. W. King, I excised the mammary gland and the axillary growths, and the patient made a very rapid and, to all appearance, complete recovery, so that on Sept. 5th, that is three months afterwards, Dr. Alvord wrote me the following letter:

Clinton, Mich., Sept. 5th, 1877.

My Dear Doctor:—Mrs. B. greatly desires an operation for the removal of her ovarian tumor this month. What do you think of it? She is evidently failing. For six or eight weeks after the first operation she did splendidly, and was really better than for many months; then she began to lose appetite, her feet began to swell, urine became deficient but normal in other respects. Under proper remedies she began to improve, but is just able to be about the house and ride out a little. She is determined on an operation.

Truly yours, A. W. Alvord.

To this letter I replied, appointing the 25th of September for the operation. Drs. Alvord of Clinton, Hamilton of Tecumseh, Rynd and Allen of Adrian, G. W. King and A. C. Maclean assisted me, the latter administering the anæsthetic (ether). The operation was performed in the usual way with all the antiseptic precautions. The tumor was, as anticipated, multilocular, and could not be much reduced by tapping; consequently the incision had to be extended nearly to the umbilicus. The pedicle was short and comparatively small. The omentum was adherent to the anterior surface of the tumor, but was easily separated; some pelvic adhesions were also easily disposed of. The pedicle was treated as in the previous cases, and the wound dressed as usual. The glass drainage tube was not used. The further history of this case may be

summed up in the following note, which I received from Dr. Alvord on the 6th of October, the 11th day after operation:

> Mrs. B. is in most excellent condition; could not be better Temperature normal; pulse has not been above 90 for days. Appetite good; expression bright; sleeps well; digestion good. The prolapsus uteri has vanished spontaneously and entirely. It would do you good to see her. Yours truly,
>
> A. W. ALVORD.

Two days after this cheerful report there was a mass of induration in the neighborhood of the umbilicus and a well marked condition of phlegmesia dolens of the left leg. These symptoms soon disappeared under Dr. Alvord's judicious management, and the next I heard of Mrs. B. was, that she was walking and driving out. Since then Dr. Alvord has excised two or three small masses of suspicious induration from the neighborhood of the amputated breast, but the latest information I have is that she was busily engaged in house-cleaning, and well in all respects, and that was two weeks ago.

Case 5.—Mrs. B., of Adrian, Mich., aged 31, married, and has two children, the youngest being eight years old. Had always enjoyed good health. First noticed enlargement on right side about two years ago; the enlargement at that time was movable. In August, 1877, the tumor had increased to such an extent as to cause serious annoyance by pressure, so that the patient suffered severely from dyspnea, œdema of the extremities, and irritation of the digestive organs. At that time the patient consulted Dr. Allen of Adrian, who at once tapped the ovarian cyst, and removed 16 quarts of fluid. The relief afforded by this operation, though very great, was only temporary, and in a short time patient was worse off than before. The enormous distension of the abdomen interfered with breathing to such an extent that patient could not lie down. Micturition was very difficult, and the quantity of urine much smaller than normal. Menstruation occurred once every two weeks, and was always free. On the 10th of December, at noon, ovariotomy was performed; the girth at umbilicus being then 58 inches, and the distance from the ensiform cartilage to pubis 22½ inches. The operation was performed at Ann Arbor. My colleagues, Drs. Frothingham and Dunster, assisted me; also Drs. King and A. C. Maclean, the latter having charge of the ether. Antiseptic precautions were observed. Omental and parietal adhesions existed, but were disposed of without serious difficulty. The pedicle was short and thick, and was treated as in the previous cases. The left ovary was found to be cystic, and was also removed.

The glass drainage tube was introduced, and the external dressings applied as usual. The cysts with their contents weighed 60 pounds. Patient rallied well from the shock, but suffered from nausea and vomiting for two days. Dec. 13th—General condition very favorable; wound healed by first intention, except where the glass tube protrudes; no discharge through the tube. 14th—All symptoms favorable, except a suspicious rise in pulse and temperature, the former being 120 and the latter 104°; ordered six grains quinine every third hour, and to have the peritoneal cavity washed out every evening. *Mem.*—Great improvement; temperature 100°, pulse 104. Dec. 15th—Temperature 100°, pulse 100; a laxative enema administered with the effect of securing a free evacuation of the bowels. Dec. 16th—All well; moved into adjoining room on the lounge. Dec. 21st—Sat up in a chair. Dec. 22d—Complains of feeling tired; pulse 120, temperature 103°; used peritoneal injection, and resumed administration of quinine internally. December 23d, morning—Pulse 130, temperature 103⅝°; countenance haggard and anxious; throbbing of veins in the neck; no appetite, low spirits; vaginal examination detected a tense swelling in the Douglas cul-de-sac, into which a long curved trochar and canula was at once introduced, and a pint of sanious fetid pus withdrawn; afterwards a small gum elastic catheter was introduced through the canula, and retained to furnish free drainage, the canula itself being withdrawn; through the catheter a weak solution of carbolic acid was injected into the sac, which was evidently shut off from the general peritoneal cavity by adhesions. Evening memorandum—Patient's whole appearance changed for the better; pulse 108, temperature 100°. Jan. 3d—Since last note patient has continued to improve daily; has taken ten drops of the tincture of iron three times a day; has a good appetite, and feels well in all respects. Went home five weeks from the day of operation, and has continued well up to the present time.

Case 6.—On the 14th January, 1878, I saw Mrs. A. B., a widow aged 57, at Macon, Mich., whom I found suffering from a multilocular ovarian cyst of three years' growth. She had never been tapped, nor subjected to any special treatment for ovarian disease, which had now reached the third stage of its growth, and had become intolerable to the patient. Dr. Wood of Macon, her family physician, had previously given me a full description of the case, so that at my first visit I went prepared to operate if, after due examination and consultation, it should be considered necessary and proper to do so. Drs. Hamilton and Fisher of Tecumseh, Dr. Alvord of

Clinton, G. W. King, and A. C. Maclean were present. Notwithstanding the long-continued irritation of the tumor, patient appeared to be in very good health and in an excellent frame of mind, tired of her burden, anxious to get rid of it, and sanguine of recovery. On examination a multilocular tumor was easily made out, and no obstacles of any kind to the operation could be detected by external examination; consequently the operation was immediately performed. The abdomen measured 51 inches in circumference, 21½ from ensiform to pubis. No adhesions were encountered, and the patient was returned to bed in less than twenty minutes from the commencement of the operation. The tumor and contents weighed upwards of fifty pounds. There was comparatively little shock, and with the exception of vomiting for one day and some occasional tympanitis, this patient never had a troublesome symptoms of any kind, and I never saw her from the time of the operation until some weeks afterwards, when she was entirely convalescent. Her family physician, Dr. Wood, and Dr. G. W. King, my able and trusty assistant, conducted the after treatment. The glass tube was not used in this case, as it was not thought to be necessary,—an opinion which the result fully justified. When last heard from, a few days ago, this patient was alive and well, and was heard to declare that she would not have her ovarian tumor replaced in its original situation for twenty times what it cost her to have it removed.

Case 7.—February 22d, 1878, I met with Dr. Murray, of Flint, Mich., in consultation on the case of Miss B., a patient of his who had suffered from an ovarian tumor for ten months at least. The patient was 44 years of age, and had generally enjoyed good health until the present trouble commenced. The tumor was found to be multilocular, and had advanced to the third stage, although not very prominent. Patient had lost flesh and strength, and at the time of our seeing her was extremely thin and cachectic in appearance. Her digestion was much impaired, and her spirits greatly cast down. The tumor was very immovable, and evidently consisted of numerous distinct cysts, with much solid tissue. Vaginal examination demonstrated the existence of adhesions to the pelvic walls and viscera, especially the uterus, which was immovable, and indurated in such a marked degree as to excite a very strong suspicion of malignant degeneration. There was, however, no uterine discharge, nor was the uterus enlarged. The nature of our diagnosis having been fully explained to the patient and her friends, and a very unfavorable prognosis

given, we left the patient with the understanding that, although an operation was not recommended, we were willing, nevertheless, to perform at least an exploratory one in the event of the patient and her friends electing to take the slight chance thereby afforded. In a few days Dr. Murray wrote me that an operation had been decided upon, and Feb. 24th was appointed for the purpose. Drs. S. King and A. C. Maclean and Mr. A. L. Worden accompanied me from Ann Arbor, and they, with Drs. Murray and Bates of Flint, assisted me to perform ovariotomy; the ether was, as usual, administered by my brother. The tumor was found adherent in almost every direction, and its pelvic portion was evidently malignant, and was with great difficulty separated from the pelvic walls and uterus and other structures. The malignant tissue seemed to be confined to the ovary itself, and when removed, the uterus was found to be freely movable, and the diseased structure entirely eliminated so far as we could determine by careful examination. A drainage tube was introduced, and the wound closed and dressed in the usual manner. The shock of the operation did not appear so great as we had anticipated, and the patient made very little complaint of pain at any time after the operation. She slept very comfortable the first night, and next morning felt quite bright and hopeful, although the temperature was 103°, and pulse 120. This condition persisted until the close of the third day, when she sank gradually, and quietly, and died from exhaustion.

Case 8.—Mrs. P., aged 34, married, and the mother of several children, came to Ann Arbor from Three Rivers, Mich., June 1st, 1878. She applied for advice respecting an ovarian tumor, which had been noticed for the first time one year and a half previously; had now reached the third stage, and was a source of great distress to her. She had never been tapped. On examination an oligocystic tumor was diagnosed, and as the patient's health seemed to be good, except in so far as it was affected by the tumor, ovariotomy was strongly recommended both by Prof. Dunster and myself. The operation was performed June 11th, 1878, in the presence of Professors Dunster and Frothingham, Drs. Richards of Detroit, Whelan of Hillsdale, A. C. Maclean, and G. W. King. The operation was made in the usual manner; no very serious adhesions were met with, and the operation only occupied 16 minutes time. No drainage tube was used. The patient rallied quickly from the shock, and all proceeded favorably until the end of the third week, when a steady rise in pulse and temperature occurred, and a hard swelling was noticed in the right iliac

region. All the sutures had been removed on the fifth day, as the wound had healed by the first intention. On making a vaginal examination, a tense swelling was discovered in front of the uterus. This swelling appeared to be connected directly with the swelling above the pubis, in which fluctuation could be felt. From these signs it was suspected that a collection of fluids had formed in that situation. I passed a long straight trochar and canula cautiously into the swelling through the roof of the vagina, but was disappointed at the result, which was simply a little bright red arterial blood. It thus appeared that I had passed the trochar and canula into the body of the ante flexed uterus; I accordingly withdrew the instrument, determined to wait and watch for future developments. The next day, June 26th, a very profuse diarrhea took place, and the anterior fluctuating tumor disappeared in the course of a few hours, and with it the high temperature and rapid pulse. No bad consequences followed from the well-meant but mistaken plunge of the trochar into the uterus, and the patient was dismissed cured six weeks from the time of the operation, and she has continued to enjoy the best of health since.

Case 9.—Mrs. K., aged 57, married, without children, consulted me in December, 1878, on account of an ovarian tumor which had already been diagnosed by her physician, Dr. Merritt of Charlotte. Prof. Dunster examined this case with me, and we diagnosed a multilocular tumor in the third stage of its evolution. The tumor seemed to be unusually solid, especially the pelvic portions of it, and we discovered some evidences of malignant degeneration; the uterus felt hard and somewhat fixed; extensive adhesions and binding down of the tumor in the pelvis, and involving it intimately with the parietes and viscera, were clearly diagnosed. The patient's general health was much impaired, and she was emaciated and anæmic. There could be no room for doubt as to the great gravity of the prognosis, and we did not hesitate to lay the facts of the case with great distinctness before the patient and her friends, and we placed the onus of electing or rejecting the last slim chance afforded by operation entirely upon them. They decided at once in favor of operation. Consequently, on the second of January, 1879, with the assistance of Prof. Dunster, A. C. Maclean, and A. L. Worden and J. Jones Hudson, I performed the operation. The accuracy of our diagnosis was now fully demonstrated. When the abdominal cysts had been evacuated and numerous strong adhesions separated, the pelvic portion of the tumor was discovered to consist of a mass of carcinoma. The tumor was adherent in every direction

and to nearly all the viscera of the abdomen and pelvis, especially to the uterus, which was completely surrounded by the morbid growth, and much time and care were required to effect its release. This was ultimately accomplished without lacerating or contusing any important organ; many ligatures were required to arrest the hemorrhage from the separated adhesions, and a good deal of time was spent in endeavors to arrest oozing of blood and in sponging out the peritoneal cavity; a glass drainage tube was inserted, and the wound closed and dressed as usual. The patient was returned to bed within an hour from the time the operation was commenced. There was a good deal of shock, but she soon became conscious and began to rally; during the afternoon and evening she seemed to gain strength slowly but steadily, the pulse becoming gradually fuller and stronger; when spoken to she always replied that she felt comfortable and confident. At 9 P. M. I left her for the night, with the assurance from herself that she was going to have a quiet and comfortable sleep. In half an hour I was called to see her hurriedly, and was at her bedside in a few minutes' time, but she was already dead.

The *post mortem* examination revealed nothing but a slight amount of serous and bloody fluid in the peritoneal cavity. Death was, in my opinion, due entirely to shock.

Case 10.—Mrs. H., of Three Rivers, Mich., aged 30, came to the University hospital Jan. 1st, 1879. Patient stated that she had suffered from an ovarian tumor for three years; that she had been tapped four times, the last operation having nearly proved fatal from general peritonitis. She had been pregnant several times, but had never borne a living child. On examination it was found that the patient's health was very good, although she displayed in a marked degree the characteristic emaciation of ovarian disease; the abominal cavity was extended to its utmost capacity, girth at umbilicus being 50½ inches; fluctuations could be felt distinctly in every direction; the uterus was normal in size and position. Prof. Dunster examined this case with me, and we diagnosed a monocystic ovarian tumor, with few, if any, adhesions, and we regarded it as a favorable one for operation. The patient was extremely anxious to have the operation performed; consequently, on January 13th, 1879, with the assistance of Prof. Dunster and my usual corps of hospital assistants, I proceeded to operate in confident anticipation of being able to accomplish my object with ease and celerity. The result demonstrated once more the danger of error in diagnosing intra-abdominal tumors.

The cyst wall was found intimately incorporated with the peritoneal lining of the abdominal cavity, so that, notwithstanding the utmost caution and deliberation, I soon discovered with great regret that I had been led into the mistake of pursuing the separation of the cyst walls too far,—*i. e.*, to the extent of stripping off the peritoneal lining itself. When the precise condition of matters is considered, this mistake may possibly seem explicable, if not pardonable. The condition was simply as follows: a thin cyst of ovarian origin containing an immense quantity of fluid, together with large cauliflower-like masses of dendritic tissue, which experience has shown always grows in the interior of a cyst; finding these masses, it did not seem to us that it would be proper to merely remove them, which could easily and quickly have been done, and leave the cyst behind to secrete more fluid and perhaps give rise to more solid growths in the future, consequently we used our endeavors to accomplish what ultimately proved a physical impossibility,—*i. e.*, a separation of the intimately incorporated cyst wall from the peritoneum. Had I cut short my operation and confined my efforts to the dendritic masses, my patient would have had a better chance of recovery at the time, although, of course, an early relapse would have been the inevitable result. Having ligatured the pedicle of each cauliflower mass and removed them, carefully replaced the separated peritoneum, spunged out all the remaining fluids, I closed up the wound and dressed it in the usual manner. The latter healed rapidly, and the patient did remarkably well until the third day, when peritonitis set in, under which she gradually sank, and died about the close of the sixth day after the operation.

I may mention here that I have searched the annals of ovariotomy in vain for a parallel or analogous case to the one here recorded. If any such case has ever been observed I do not think that it has been published.

Case 11.—Mrs. L., of Berrien Springs, Mich., aged 46, married, and the mother of two children, the youngest of whom is eight years old. This patient was first seen by me May 9th, 1879, in consultation with Dr. Armstrong of Berrien Springs, who furnished me with the following history: Patient had been aware of a small swelling in the left groin for six years, but had suffered no inconvenience from it until within the last few months, in which time it has grown rapidly and become very painful; the menopause was passed 18 months ago; the patient's health had generally been good, but had failed rapidly of late. On examination, a multilocular ovarian tumor was discovered; it had fairly entered upon

the third stage, and although not very large, still it projected sharply to the front, and was so slightly movable that strong adhesions were suspected; the uterus was slightly drawn up, and the os was tilted forward onto the posterior surface of the pubis. The patient's pulse was 120, and her temperature 101½° on the evening of the ninth of May. A week before the time of my seeing Mrs. L. she had a severe attack of pain, and so much general prostration that all hope of saving her life by any means had been abandoned. She had, however, rallied a good deal, and it was hoped that the removal of the great cause of all her troubles might yet be the means of saving her life; at any rate, ovariotomy afforded the only chance, and I determined, after careful consideration of her case, to perform the operation next morning, May 10th, 1877. Dr. Armstrong of Berrien Springs, and Drs. A. L. Worden and A. C. Maclean of Ann Arbor, assisted me, the latter managing the ether. The tumor grew from the left side and was polycystic; the adhesions were numerous and strong and vascular; the great omentum was not only firmly attached to the anterior surface of the tumor and to the abdominal walls, but was also enormously thickened and altered by inflammatory action; ligatures were used to arrest hemorrhage from the omentum, and a great mass of it was removed with the tumor; the pedicle was very short and very broad, and the tumor was intimately adherent to the fundus and body of the uterus, from which it was separated with considerable difficulty; numerous ligatures were required to arrest hemorrhage from adhesions; the pedicle was transfixed and ligatured as usual; the tumor was found inseparably attached to the right ovary, so that the latter was removed along with the tumor. Comparatively little blood was lost during the operation, which lasted 45 minutes. A drainage tube was inserted, and the wound closed and dressed as usual. The further history of the case is summed up in the following brief notes:

Two P. M.—Patient has recovered consciousness and feels comfortable; pulse 140, temperature 98°. 5.30 P. M.—Patient easy; bladder emptied by catheter. 7 P. M.—Pulse 120, temperature 99¾°; restless. Midnight—Pulse 140, temperature 99¼; used catheter. May 11th, 7 A. M.—Pulse 160, feeble; temperature 100¼°; urine scanty and high colored. 12 noon —Gradually sinking, in spite of the free administration of stimulants; peritoneal cavity washed out without benefit. Patient died 2.30 P. M. from shock. A hasty examination, *post mortem,* of the abdominal cavity demonstrated the absence of hemorrhage and peritonitis.

Case 12.—May, perhaps, be best introduced by means of the following letter from the family physician of the patient:

Millbrook, Mecosta Co., April 23, 1879.

SIR:—I have a lady patient, a resident of the township of Hinton, who is suffering from an abdominal tumor of large growth. I have diagnosed the case as multilocular ovarian tumor, principally solid, of six years' growth. The patient is in good health otherwise; eats well, sleeps well; is able to go about the house and do some light work. She is 45 years of age; has a family of six children, the youngest child being 13 years of age. She is anxious to have the tumor removed, and is willing to come to the city of Ann Arbor for that purpose at any time that will suit your convenience. I remain your obedient servant,

J. W. PATTERSON.

May 15th patient arrived at Ann Arbor. On examination the diagnosis of Dr. Patterson was fully confirmed in all repects. The girth at umbilicus was 52 inches; from ensiform to pubis 31½ inches; the uterus appeared to be normal in size and position. General health exceptionally good. On Monday, May 19th, the operation was undertaken, Drs. Frothingham, A. L. Worden, A. C. Maclean, of Ann Arbor, Noyes of Detroit, and Patterson of Millbrook, being present and assisting. On laying open the abdominal cavity in the usual manner one extensive adhesion was met with between the great omentum and the anterior surface of the tumor; having ligatured this adhesion and divided it, I was able to pass a metallic sound in every direction around the tumor; a good deal of ascitic fluid escaped; the cyst wall was tapped in various directions with a Well's trochar, with the effect of evacuating a little cystic fluid, pretty freely tinged with arterial blood. I at once determined to, first, enlarge the opening in the cyst wall and introduce my hand so as to break down and scoop out the contents; and second, to enlarge the incision sufficiently to extract the remainder. In carrying out the first part of this programme, considerable blood was unavoidably lost. Having broken down many cysts, and scooped out much solid and semi-solid tissue (many of the cysts were filled full of inflammatory masses, and many of them were filled with masses of fibrous tissue resembling in structure and appearance uterine fibroids),—having, I say, reduced the mass of the tumor in this way, and having enlarged the incision to the extent of ten inches, I was able to extract the remainder, a solid mass which weighed 34 pounds. The pedicle was of moderate length, but unusually thick, measuring nine and a half inches in circumference, and containing numerous enormous vessels; it was transfixed and ligatured, and an extra

ligature thrown around the whole for safety. Very little fluid escaped into the peritoneal cavity, so that there was little to do in the way of sponging out. The operation lasted forty minutes. A glass drainage tube was introduced; the wound was closed and dressed in the same manner as already described. When returned to bed patient was pulseless and deadly pale; consciousness soon returned, and she expressed herself as feeling easy. Stimulants were administered in the form of small repeated doses of brandy and ammonia. Five hours after the operation the pulse had become just perceptible at the wrist; the body and extremities were warm, and the countenance comparatively bright. The patient complained very much of burning thirst and nausea, for the relief of which every conceivable remedy was used, but with very little benefit. Throughout the night she vomited very frequently,—a symptom from which she had suffered a great deal for some months previous to operation. In the morning she was easier; the vomiting ceased for some hours; she was able to take beef tea and milk and lime water. Towards evening the nausea and vomiting returned; collapse supervened, and she sank rapidly but painlessly, and died 11 P. M., 36 hours after operation.

Post mortem.—Pedicle securely ligatured; slight local patches of peritonitis, but no effusion, and not enough peritonitis to have materially influenced the result. The patient died from shock, the severity of which was attributable to the great loss of blood. The parietal layer of the peritoneum throughout its whole extent was thick and friable, resembling very closely the texture and appearance of articular cartilage.

REPORT ON THE WORK OF THE STATE BOARD OF HEALTH.

BY HENRY F. LYSTER, M. D., DETROIT, MEMBER OF THE BOARD.

The law organizing the Board, passed by the Legislature in the winter of 1873, took effect on the 30th of July of the same year. Since that date the Board has been accustomed to hold regular quarterly meetings at Lansing.

Beside the work performed in the office of the Secretary, in the organization of 1,224 local boards of health in the cities, villages and townships; the distribution of circulars regarding the prevention of contagious diseases; the collection of reports; answering letters upon health matters; the preparation of bills for the Legislature upon the subject of public health; the investigation of epidemics and nuisances; the attendance upon conventions and sanitary societies; the correction of proof and collection of vital statistics, and publication of circulars and reports; and the procuring of books and pamphlets upon State medicine,—the Board has presented in their six annual reports seventy-one separate papers upon subjects relating to the preservation of health and the prevention of disease. The following are the lists of subjects and titles of papers, embodied in the six annual reports of the Board:

1. Illuminating Oils.
2. Poisonous Wall Papers.
3. Hygiene of Public Schools.
4. Entailments of Alcohol.
5. Impurities and Adulteration of Table Syrups.
6. Draining for Health.
7. Relations of Schools to Health.
8. Recuscitation of the Drowned.
9. Sanitary Inspection of State Institutions.

10. Cerebro Spinal Meningitis.
11. Meteorology of Central Michigan.
12. Necessities for Constituting State and Local Boards of Health.
13. The use of Poisons in Agriculture.
14. Trichiniæ.
15. The Influences of Occupations upon Health.
16. The Disposal of Human Excreta.
17. Failure to Prevent Deaths believed to be Preventable.
18. The Reproduction of Diseased Germs.
19. Illuminating Oils (2d paper).
20. The Water Supply in its Relation to Health and Disease.
21. Ozone.
22. The Influence of Drainage in Removing Certain Forms of Diseases and in Promoting the Healthfulness of Cities.
23. Achievements of Hygienic Science and Art.
24. Means of Escaping from Public Buildings in case of Fire.
25. Vaccination.
26. Report on Epidemic Scarlatina at North Lansing.
27. Report on Criminal Abortion.
28. Report on Health Department American Social Science Society, 1876.
29. Water and Water Supply of Michigan.
30. The Water Supply, and its Relation to Health and Disease.
31. Report on Water supply in Michigan (2d paper).
32. Report on Methods of Collecting Vital Statistics.
33. Ventilation of Railroad Cars.
34. Report on Diseases in Michigan for 1875.
35. Report on Sanitary Section, American Medical Association, 1877.
36. Heredity in its Relations to Public Health.
37. Labeling Medicines.
38. Recreations and Health.
39. Healthful Dwellings.
40. Illuminating Oils in Michigan (3d paper).
41. Laws Relating to Illuminating Oil.
42. Report of Health Department, American Social Science Association, 1876.
43. Infant Diet.
44. Small-pox in Detroit.
45. Baths and Bathing.
46. Persistence in the Effort to Resuscitate the Drowned.
47. The Water Supply of Localities in Michigan.
48. Inspection of Illuminating Oils.
49. Reports of Diseases in Michigan, 1876.
50. Weekly Reports of Diseases in Michigan, 1876.
51. Report relative to Erysipelas and Puerpural Fever.
52. Contributions to Study of Spread of Diphtheria.
53. Report Relative to Scarlatina.
54. Report of American Public Health Association, 1876.
55. Report on Special Danger of Railroad Switches.
56. The Work of the State Board of Health.
57. Report of Public Health Department, American Medical Association.
58. Lead Poisoning from Tinned and Metalized Ware.
59. Cancer not caused by the use of Tomatoes.
60. Influence on Health of Wood Pavements and Wooden Sidewalks.

61. Report of Public Health Department, American Medical Association, 1877.
62. Public Health Proceedings, Michigan State Medical Society, 1877.
63. The Opium Habit in Michigan.
64. Diphtheria: Report of three Epidemics, and Circular.
65. Report and Syllabus of Lectures on Public Health, given in University of Michigan, 1877.
66. Preservation of the Teeth.
67. Diseases in Michigan, 1877.
68. Climate and Topography of Lower Peninsula.
69. Principal Meteorological Conditions in Michigan.
70. Weekly Reports of Diseases, 1877.
71. Coroners and Coroners' Inquests.

The field of sanitary work is coëxtensive with the habitable portion of the earth. It contains within its boundaries all the interests pertaining to the best development of the race, and to the maintenance of the most perfect physical well being of not only those now living, but of the generations which are to follow.

Sanitary work looks after the interests of the farmer living on his broad acres, the mechanic in his shop, the professional man in his library, the child in the school-room, the soldier in his regiment, the criminal in the prison, the beggar on the street. It is found in the home, in the factory, in the ship, in the mine, in the city, and in the country. Wherever a human being lives there will be found work for the sanitarian.

We have not space in this paper to more than glance at the work which has been done by the indefatigable Secretary, as well as by the other members of the Board. The work upon which the Board has been engaged will, for the most part, be continued so long as the Board has a corporate existence, while, at the same time, new ground will be opened as occasion or circumstance demands, with a more thorough and general cultivation of all the branches of sanitary science from year to year.

In the midst of its work, and after having obtained a grand boon for the people in the matter of government inspection of illuminating oils, we note the reduction of the flash test from 150° F. to 140° F., and finally to 120° F., with the chill test to exclude paraffine omitted. The State Inspector of Illuminating Oils, in his official report for 1878, makes the statement that only one life had been lost in the State during the year by the explosion of a lamp in which illuminating oil was being used, and that this accident occurred from using oil below the test required by the Michigan statute, the oil having been purchased across the line of the State of Ohio. While we have low-

ered our standard from 140° F. to 120° F., with the removal of the chill test, the State of Ohio has increased the test to 140° F. While we have in this State very materially removed the wide margin hitherto maintained between danger and safety, the improvement in the manufacture of lamps will prevent the change being so noticeable as it would have been a few years since; still we can hardly hope to obtain that marked immunity from accidents by kerosene explosions which has been so noticeable the past five years. The fact that this reduction has been urged by a monopoly engaged in the manufacture of the various grades of oils, and for the purpose solely of pecuniary gain, does not make us feel that the case has been decided upon its merits. Had not the results of the Michigan test been so signal as to have attracted universal attention, and a good deal of emulation on the part of other States, the lowering of the test to the border line of danger would not have been so deplorable.

The Board will find that the inspection of food will press upon its attention, and the sooner it begins to systematize its work in this direction the better. In all countries adulteration enters into the process of manufacture of most articles offered for sale or exchange, for the sole purpose of increasing the profit to the vendor.

From the earliest times there have been of necessity certain efforts made and laws enacted to prevent the adulteration of food and drink. We have records of the enactment of laws in England for this purpose in A. D. 1267, and punishments were provided in 1581, 1604, 1836, 1851, 1875. The Sale of Food and Drugs Act, under which inspections are now made, and punishments upon conviction ordered, in Great Britain, was passed August 11, 1875, all previous Acts having been repealed. In this Act there are descriptions of offenses, provisions made for appointment and duties of analysts, and method by which analyses may be obtained, and proceedings instituted against offenders. By the requirements of this Act any purchaser may obtain from the public analyst an analysis of any article of food or drink or drug, for the sum of $2.50, and receive from him a certificate of the result of his analysis. Any medical officer of health, inspector of nuisances, or inspector of weights and measures, or any inspector of a market, or police constable, under the direction and at the cost of the local authority appointing such officer, may procure any sample of food or drugs and submit the same to be analysed by the analyst of the district, who shall give a certificate of such analysis. Any per-

son refusing to sell for analysis articles exposed for sale shall, upon conviction, be fined not to exceed $50. Any person mixing, staining, powdering any article of food with any article injurious to health, or any person offering for sale any article of food so adulterated, shall, for a first offense, be fined not more than $250; every subsequent offense after conviction for a first offense shall be a misdemeanor, for which the person convicted shall be imprisoned for a period of not exceeding six months at hard labor.

That adulteration of food is not confined to other countries than our own will appear more clearly when we have investigated the subject more thoroughly. A special investigation by Dr. Kedzie, a member of the Board, made in 1874, on the adulterations of table syrups, showed that out of seventeen (17) specimens purchased from the most reliable grocers and dealers, only two (2) were pure sugar-cane syrup; all the others were made from starch sugar (glucose), and were adulterated with impurities more or less noxious. Large quantities of sugar are made from starch, and this sugar is deficient in sweetening qualities, one pound of cane sugar being equal to two and one-half pounds of starch sugar. The syrups made from the starch sugar are deficient in this respect in the same ratio, besides containing lime, iron, and sulphuric acid, as impurities. Sugar is adulterated with sand, flour, and other materials. When we reflect that the annual consumption of sugar is at the rate of forty-one (41) pounds per capita in the United States and Great Britain, the importance of this single item in the family dietary is apparent.

Butter is debased by salt, lard, tallow, water, milk, and oleo-margarine.

Coffee, with chickory, roasted wheat, rye flour, burnt sugar, etc.

Milk, with salt and water.

Tea, with sand, iron filings, exhausted leaves, foreign leaves, and green tea with black lead, Prussian blue, China clay, etc.

Meat is very frequently offered in a condition unfit for food. Prof. Gamgee, of London, estimates that one-fifth of the meat exposed in the market in that country is diseased to a greater or less extent. It is well known that animals are subject to a great variety of diseases; among them are acute infectious fevers, as typhoid fever, cow-pox, pleuro-pneumonia or Texas cattle disease; also to parasitic disease, as trichina, distoma-hepaticum or fluke, phthisis pulmonalis or consumption, glanders, farcy, cancer, and many others. Animals are killed over or under the proper age, or after they have been exhausted

by long drives, or are worn out by transportation and over crowding. They are in many cases improperly fed, sometimes upon the refuse from the distilleries or upon tainted and decomposing food. The evil effects of eating diseased meat can not usually be shown. The process of cooking usually destroys any active virus or parasitic disease, though in some instances cases of diarrhea and dysentery have followed the use of the meat of over-driven cattle; anthrax and carbuncles have appeared subsequently to the use of meat of animals killed when dying of Texas cattle disease. The meat of animals killed when in an exhausted condition will keep but a short time, and very readily takes on the putrefactive changes. That large quantities of diseased meat must be consumed in certain portions of this State will appear when we know that several hundred cows have died within two years in this city and immediate vicinity, of Texas cattle disease. Many animals having been killed when they were sick, were undoubtedly eaten as beef or beef sausage in this city. I am credibly informed that persons have been engaged in this business as a specialty, and have made it profitable.

Milk should also be inspected in cities. Many venders do not wish to supply rich milk; they prefer the watery milk, and purchase cows which are large milkers. The feeding of milk cows upon skimmings from the distilleries changes the flavor and other good qualities of the milk, and injures the health of the cow. Milk is adulterated with water and salt. Young children, particularly teething infants, are lost by tens of hundreds every summer on account of the inferior quality of the milk, resulting from the improper feeding of the cows. Milch cows should be pastured during the grass-growing season.

We will not have time or space to further illustrate the matter of the adulteration of food, and the consequences of this upon the health of the community, with the importance of correcting them so far as possible by proper inspection.

The construction of Abbatoirs in cities, at which all slaughtering and rendering of fats must be done, should be required. These have been in use with excellent effect and considerable profit at Boston, New York, and Chicago. One of the most frequent causes of complaint in cities is this one of butchers slaughtering cattle and sheep within the city, and the renderers trying out the fat and making soap in thickly-peopled neighborhoods. It is difficult to show that the presence of butcher shops and fat rendering factories, and candle and soap factories, produce serious or fatal attacks of disease, and yet we all know

that they are nuisances in the meaning of the common law. In many cases they can be abated where the proper steps are taken under the law as it exists in this State at the present time.

In speaking of food and its adulterations, and of diseased meat, the subject of cookery naturally should be investigated and studied. How much disease could be prevented by good, scientific cookery? Who will build a cooking school in Michigan, and receive in return the thanks of those who obtain from it cooks skilled in the preparation of the varied and wholesome products of our noble State, which really offers to us as large a variety of animal and vegetable material for food as any country on the globe? The necessity of sanitary work in the matter of dietetics becomes more and more apparent in a health and economic point of view the more the subject is enquired into. It can safely be prognosticated that but a few years will elapse before cooking schools will be established in all of our larger cities, and their work will solve many an obscure case of medical practice. How soon will we follow Gothenburg, Edinburg, London, Toronto? Who in Detroit has $20,000 worth of interest in this most vital enterprise?

One of the most honored members of the Board, Dr. Hitchcock of Kalamazoo, has, in a very valuable and able report in 1874, struck at the evils of intemperance in alcoholic beverages from the sanitary point of view. We can say, in addition to all that has been written and spoken upon the alcoholic question, that the logical results of the observations upon its use prove it to be not only a more important factor than any other in the production of preventable disease, but the agent which prevents the race from taking its proper intellectual and physical station in the century. In other words, that the advancement of the race in the past 2,000 years has been retarded in every way, particularly in its intellectual and moral qualities, while its susceptibility to disease has been increased in a greater degree by the use of alcoholic beverages than by all other causes combined. Dr. Hitchcock asserts that one-tenth of the deaths and the same per cent of disease can be traced, directly or indirectly, to alcohol. If we regard the fact that so many constitutions have been impaired by this agent for generations, we can understand how such a large proportion could be thus attributed. It is a demonstratable fact, that the manufacture of alcohol is steadily upon the increase, although its use as a beverage may not be upon a proportionate increase, so much of it is required in manufactures and the arts. 14,680,552 bushels of grain were used in the United States during the year

ending June 30, 1878, in the manufacture of 56,103,053 gallons of distilled spirits.—(Report Commissioner of Internal Revenue, 1878.)

The quantity of wines, liquors, etc., imported and exported during the years 1876, '77, and '78, are officially reported as follows:

YEAR.	IMPORTED.			EXPORTED.		
	SPIRITS AND WINES.		BEER.	SPIRITS, ETC.	BEER.	
	Dozs.	Gals.	Gals.	Gals.	Dozs.	Gals.
1876....	421,252	5,457,154	1,244,759	1,136,374	13,706	160,461
1877....	361,382	5,540,641	837,336	2,091,986	59,879	133,522
1878....	377,850	4,500,570	849,526	3,919,971	81,598	123,158
Total ..	1,160,484	15,498,365	2,931,621	7,148,331	155,183	417,141

(Fourth quarter, 1878, estimated.)

Fermented liquors manufactured:

1877..... 9,074,306 barrels = 281,303,486 gallons.
1878..... 9,473,360 " = 293,674,160 "

Quantity of distilled and fermented liquors produced in the United States:

1876 (year ending June 30)—distilled liquors.... 57,959,647 gallons.
1877 " " " " " .... 59,912,268 "
1878 " " " —fermented liquors.. 56,103,053 "

An average of 7 to 7½ gallons per capita per year for each inhabitant of the United States; or at an estimate of one in four as consumers, an average of 28 to 30 gallons per year, and 1½ gallons distilled liquor per capita. Deduct from this estimate the quantity of distilled alcoholic spirits used in manufactures, arts, trades, etc., which will slightly reduce it, but not sufficiently to remove the fraction.

In view of the fact of the increase of nervous diseases, it may be well in this connection to note the use of tobacco at this time. The figures are from official sources:

Cigars imported..... 42,000,000
Cigars manufactured..... 2,082,000,000

Total 2,124,000,000

Manufactured tobacco..... 119,406,588 pounds

Tobacco exported from and imported into the United States during year ending June 30, 1878:

IMPORTED.

Leaf	7,980,836 lbs.	$4,102,782 00
Cigars*	622,805 lbs.	2,269,267 00
Other manufactures of tobacco		67,819 00
		$6,439,868 00

EXPORTED.

Leaf	283,973,193 lbs.	$24,803,165 00
Cigars	2,082 lbs.	46,170 00
Other manufactures of tobacco		3,634,847 00
		$28,484,182 00

The report upon criminal abortion shows that the Board have not been derelict in regard to this great and wide spread crime. Desolating the state and debasing the moral sentiment of the state, and, as a last and least consequence, inducing a large amount of physical derangement and ill health. There will be constant work for this Board in this direction. The best method for the limitation of syphilis should also be considered by this Board, and the most effectual reported upon to the government and people of the state.

The instruction of the youth in the schools in the principles of hygiene will lay the surest foundation for its intelligent establishment. Training up the children and gradually opening their minds for the reception of the truths of sanitary science will most certainly give opportunity for the observance of its laws in the future. The text book has not yet been written which fully comes up to the requirements of the schools upon this important subject. While there are a number of very valuable and instructive text books upon physiology and anatomy and hygiene adapted to schools, yet there is none which can be recommended as coming up to the standard in purely sanitary teaching.

The Reclamation of Drowned Lands in this State is a subject which is at present receiving attention from the Board, and particularly that of the committee on drainage and sewerage. There are estimated to be about 4,000 square miles of swamp lands in the lower peninsula, or about one acre in nine is too wet for cultivation without drainage. Land has been reclaimed in a large majority of the farms by drainage, and the surface configuration of the State is such that the larger

*Import duties being levied on cigars @ $2.50 per lb. and 25 per cent, the quantity imported is stated in lbs.

portion, probably seven-eighths, can be reclaimed. A great portion of this drowned land is about the margin of the little inland lakes and upon the banks of rivers and smaller streams. When we reflect that the diminution of malarial diseases has been seventy-five per cent since the general draining and opening of the country we can see the sanitary application of the reclamation of wet lands. Extensive tracts of swamp lands have been reclaimed in the vicinity of Flint and Lansing, and at the mouth of the Clinton river in Macomb county. Operations are being made at the present time at Bay City and upon *Le Grand Marais* between Lake St. Clair and this city, the tract embracing 1,600 acres.

Complaints are made to the Board on account of the flooding of the country on lumber streams in Gratiot and Kent counties among others, and statements are made pointing out the unhealthfulness of this practice. An inspection will be made of these overflowed lands during the summer.

The attention of the Board has been frequently awakened to the necessity of adopting some acceptable plan for the relief of the smaller cities and villages and detached residences on farms in the matter of sewage, more particularly in those cases where the water supply does not permit the introduction of water through pipes. A circular is now in course of preparation to enable the Board to obtain the experience of sanitary engineers and others on this important subject.

In this connection we may mention that the Board has under consideration the propriety of the establishment of annual examinations for proficiency in state medicine or sanitary science to graduates of legalized medical colleges, granting its certificate to those who sustain the examination. A committee are to report upon this subject at the meeting in July, and are expected to present a plan in detail upon which the Board may make some definite arrangement.

There have been established in England within the past fifteen years urban and rural sanitary districts according to the population. Each of these has a medical officer of health appointed. Several of these districts are districted together under a supervising officer of health or district officer, and at the head of these districts is a department under the care of the registrar general of the kingdom, a member of the Privy Council. All of these officers have salaries according to the importance of their office, those in the rural districts varying from $200 to $1,000 per year, while the salaries of the district officers are larger. This system has grown up within the past fifteen years.

In Michigan we have similar boards of health, and most of these have appointed a physician as medical officer of health for the city, village or township. These officers are entitled to fees for services, and the amount of these fees depends upon the amount of duty required. The fees are small at present, but as the work of the Board becomes of more importance the office will become more valuable pecuniarily. It is in the ordinary nature of things that those physicians who are the best qualified by their reading and experience to become officers of health will in time obtain the appointments from the local boards. The certificate of the State Board would be an evidence of the possessor having a certain amount of knowledge upon this subject.

Examinations in State Medicine, so far as we are aware, have not, as yet been instituted in this country. There are a number of institutions of learning in Europe which offer them. Among others, the universities of Dublin, Cambridge and London have introduced them, I believe, in the order here mentioned.

In order to come more directly in contact with the people the State Board of Health determined at its meeting in April to hold two Sanitary Conventions during the coming winter,—the particular localities have not as yet been determined upon I believe,—one to be held in the eastern and the other in the western portion of the State. At these conventions it is intended to afford manufacturers an opportunity to show such material as is used in the preservation of health and prevention of disease. Aside from this interesting exhibition of manufactures, there will be discussion of sanitary measures, and particularly such as may be of great interest to the community, and susceptible of general elucidation.

I will not ask your patience to dwell much longer upon what the Board has done or intends doing. Much of its work, as the compilation of vital statistics, and meteorological observations, will be of great value in time, though not of so great immediate use. The Sanitary Survey of the State will come sooner or later.

We will not attempt to enumerate the favorable influences which the Board has already exerted upon the health of the people of this State, and particularly through its secretary. We have known of epidemics of contagious diseases, such as scarlatina, and diphtheria, and small pox, stamped out by local boards of health following out literally the instructions of the

State Board. The constant work of the Board in the direction of educating the people in sanitary affairs in recording observations on vital statistics, in meteorology, in affiliating with other state and district health boards and societies, will increase each year its usefulness to the people.

REPORT OF THE COMMITTEE ON NECROLOGY.

SUBMITTED BY W. F. BREAKEY, M. D.

The Committee on Necrology are happy to report that but few deaths have occurred in our ranks the past year, though the lives thus ended have been among our most valued members. They are Dr. Nathan Mitchell, Dr. J. H. Beech, Dr. Dwight Nims.

Dr. Zenas E. Bliss died in 1877, but the memorial notice was not furnished in time for last year's report.

DR. NATHAN MITCHELL *

Died at his home, at Colon, St. Joseph county, Mich., Jan. 26, 1879, in the seventy-first year of his age.

He was born Nov. 27, 1808, in the town of Calais, Washington county, State of Vermont. His father being a farmer, he was early trained to agricultural pursuits, which he followed until he became of age, securing at the same time more than an average education from the limited educational advantages of those days. He immediately commenced the study of medicine, and in 1830, entered the Middlebury Medical College, and graduated in 1834; starting immediately for the far west, as it was considered in those times, and located in Trumbull, Ashtabula county, Ohio, and practiced his profession successfully in that place for five years.

In 1839 he came to Michigan, and located in Colon, St. Joseph county, where he has been ever since. Commencing,

*Reported by Dr. Twiss.

as he did, with the early settlers, he has shared all the ups and downs of a new country with them, and for 40 years has been a faithful physician to the people, riding far and near in an early day to relieve suffering, and ofttimes without money and without price.

The doctor was a careful student, possessing a very active and retentive mind, ever anxious to grasp all the advancements in the science of his profession. He was a member of the St. Joseph Valley Medical Society and the Michigan State Medical Association.

About two years ago a cancer made its appearance on his lip, and has steadily progressed, destroying all the lower portion of the face, gums, jaw, and neighboring lymphatic ganglions. The doctor has borne his affliction in a remarkable manner. He suffered one operation in its early stage, and used all the means he could command to arrest the disease, but to no purpose, and for the last few months he has patiently awaited the slow but sure result.

He was a successful physician, and highly esteemed by the profession.

JOHN HENRY BEECH, M. D.,*

was born in Gaines, Orleans county, N. Y., Sept. 24, 1819; the son of Dr. Jesse Beech, who practiced medicine at Gaines, and Susan Brown Beech.

He attended the Gaines Academy, and was subsequently under the instruction of Hiram E. Pinckney, of Esperance, Schoharie county, New York. He graduated in medicine April, 1841, at Albany Medical College, and commenced practice the same year in his native place.

In 1850 he removed to Coldwater, Mich., where he resided up to time of his death, except the time spent in U. S. army as surgeon, 24th Michigan Infantry.

Both in New York and Michigan he superintended a farm, dealing somewhat extensively in fine stock. Was engaged in general practice of medicine, though since 1865 practiced surgery and gynecology as specialties.

He was the author of numerous short articles for medical journals, and various addresses at college commencements and before medical societies.

The Doctor was instrumental in resuscitating the Medical

* Data furnished by Mrs. Beech and Dr. Cutter.

Society of Orleans County, N. Y., in the beginning of his professional life, and in Michigan united with others in reviving the Michigan State Medical Society. In 1856 he was elected its president. In 1854, 1855, and again in 1875, he was a delegate from the State Medical Society to the American Medical Association, of which he was a permanent member. In 1862 he was commissioned surgeon, 24th Michigan Volunteer Infantry.

In 1865 he was elected member of American Public Health Association. In 1866 he was elected mayor of city of Coldwater. In 1870 he was elected corresponding member of Detroit Academy of Medicine, and in 1872 he was elected corresponding member of Gynecological Society of Boston. In 1875 he was elected president of the Alumni Association of Albany Medical College.

He was President of Board of Trustees of Coldwater Female Seminary, and for several years Moderator of city Board of Education. He was a liberal supporter of Ladies' Library Association, of which he was a life member. He was also an advocate and contributor to the State School for Indigent Children. He was also one of the editors of the Michigan Medical News; the number for October 25th containing an interesting editorial obituary notice, and the November 15th an interesting account of his illness and autopsy, by his friend and colleague, Dr. S. S. Cutter.

He was active, energetic, public spirited, and liberal in all matters of public interest, especially in support of educational interests and schools. He was a Democrat in politics, though not an active politician; and an attendant and supporter of the Presbyterian Church, though not a member of any church. He was highly respected by the community in which he lived for his professional ability, and for the pure moral character he had always sustained.

He was not robust, yet active and able to endure much labor. He was firm and unflinching in character, never wavering in discharge of duty, though always courteous and gentlemanly, and strong in his attachments to friends.

He was taken sick Oct. 11, 1878, and died Oct. 17, of double pneumonia. He was buried at Coldwater, a large number of his professional friends from different parts of the State with a sorrowing community of his fellow citizens being in attendance at his funeral.

Dr. Beech was three times married: in 1842 to Eliza Crounse, in 1861 to Mary Jane Perry, and in 1874 to Mrs.

Sarah E. Skeets, who survives him. Dr. Beech had no children.

To his professional brethren, particularly of his section of the State, Dr. Beech's death is a great loss, and it is no disparagement to his many able cotemporaries to say that none will be more widely missed.

The following resolutions of sympathy with his bereaved family, and paying tribute to his worth, were passed by the Calhoun County Medical Society, Detroit Academy of Medicine, Southern Michigan Medical Society, and by the survivors of the 24th Regiment Michigan Infantry:

RESOLUTIONS ADOPTED BY SOUTHERN MICHIGAN MEDICAL ASSOCIATION.

Whereas, Since the last meeting of this Association, one of the originators of this organization, and one of its most active, enthusiastic, and beloved members, and formerly its president, Dr. J. H. Beech of Coldwater, has been removed by death; therefore

Resolved, That this Association mourn the absence of the genial, yet thoughtful, face and presence of Dr. Beech, who was distinguished in this and adjoining States as a surgeon of ability and skill; who, as a member of this Association, was ever ready to work, contribute, and sacrifice for its interest; whom each member felt a personal interest and pride in; whom many of us relied on for counsel, skill, and judgment; who, besides his relations to this Association and his profession, has filled with honor responsible positions in civil and military life; who went down to the grave with the armor on, bravely and fearlessly meeting death, and whose loss we long and sincerely mourn.

Resolved, That as a feeble expression of our sorrow, love, respect, and high appreciation of his skill as a physician and surgeon, of his sterling worth, goodness, and every quality that goes to make the true man, that these resolutions be spread upon the minutes of this Asssociation, and that a copy be sent to his bereaved wife, to the medical journals of the State, and to the papers of Coldwater.

C. S. TUCKER, M. D.,
G. V. VOORIES, M. D.,
A. R. SMART, M. D.,
Committee.

Detroit, October 24, 1878.

The following resolutions of respect were passed at the annual meeting of the Detroit Academy of Medicine, held Tuesday evening, the 22d inst.:

Whereas, We have heard with deep regret of the decease of our late corresponding member, Dr. J. H. Beech, of Coldwater;

Resolved, That by his death this Academy has lost a most able and enthusiastic member; one who was ever willing to practice the healing art, whether on the battle-field or at the bedside; one who always kept abreast of the latest advances in science, and on all occasions displayed his sound judgment and great skill; his loss is not a particular one, but that of the whole profession.

Resolved, That copies of these resolutions be presented to the bereaved family and to the medical and daily press.

J. H. CARSTENS, M. D.,
F. A. SPALDING, M. D.,
C. C. YEMANS, M. D.,
Committee on Resolutions.

At the annual meeting of the Calhoun County Medical Association, held in Battle Creek, Mich., Dec. 3d, 1878, the following resolutions were unanimously adopted:

Whereas, Dr. J. H. Beech, one of the early pioneers of Michigan in the practice of medicine, has recently deceased in Coldwater, his residence;

And whereas, Both as a man and physician he was universally respected and esteemed throughout the State;

Resolved, That this Association have heard with the deepest regret of the death of our fellow laborer, Dr. Beech, and hereby express to his family our sincerest sympathy and condolence in their affliction, which we regard as our loss as well as theirs.

Detroit, October 18, 1878.

At a meeting of the members of the 24th Michigan Volunteer Infantry, called upon receiving notice of the death of Dr. Beech, our surgeon, the following preamble and resolutions were unanimously passed:

Whereas, We hear of the death of Dr. J. H. Beech on the 17th inst., at his home in Coldwater;

And whereas, He was often, as the chief surgeon of our regiment, our true and trusted adviser;

And whereas, We cannot attend his funeral; therefore, be it

Resolved, That we mourn the loss of one so true, so kind, so capable, and so deserving, with sadness no words can express. "So kindly were the elements united in him that all the world might stand up and say, 'That is a man.'"

Resolved, That we assure his widow of our sympathy in this affliction, and count his early death a serious loss to us from life's friendships formed when ties are strong and lasting.

Resolved, That a copy of the resolutions be forwarded to his widow; also furnished to the daily papers.

C. C. YEMANS,
THOMAS JACKSON,
D. V. BELL,
W. R. DOLSEY,
ALONZO EATON,
Committee.

DWIGHT BOYDEN NIMS, M. D.,*

was born September 12th, 1808, at Conway, Franklin county, Massachusetts. His parents were James Nims and Lucy Boynen (maiden) Nims, who were born, married, lived, and died

* Reported by Dr. Cyrus Smith.

in old age at the same place. According to the family traditions, his ancestors came from England in early colonial times, and settled near Boston.

He received the benefits of the district school system of education which prevailed throughout New England; when old enough to labor, working on a farm in summer and attending school in winter. He also was a pupil at the Deerfield, Mass., Academy for three years. He thus received a good, substantial, common school education, under the severe training which was in those days in vogue. In the winter of 1829 he taught a district school in the town of Windsor, Franklin county, Mass.

In May, 1830, he left Massachusetts, and, in the then parlance, "moved west," taking up his residence at Manlius, Onondaga county, New York. He there taught school for a time at a place then called Eagle Village.

In the summer of 1831 he commenced the study of his life's profession in the office of Dr. Henry B. Moore, of Manlius, with whom he, however, remained but a few months, thence going into the office of Dr. and Hon. William Taylor. With this eminent physician he remained until the completion of his preparatory studies. He attended his first course of medical lectures at the "College of Physicians and Surgeons, Western District," located at Fairfield, Herkimer county, New York. His second course was had at the "Berkshire Medical Institution," Pittsfield, Mass., from which he graduated with credit, and received his diploma as an M. D. in June, 1833. While at the first named college he had the benefit of lectures from the following eminent professors: T. Romeyn Beck, W. Willoughby, John DeLamater, James McNaughton, and James Hadley. At the "Berkshire Institution" the following was the composition of the then faculty: Drs. H. H. Childs, Chester Dewey, Willard Parker, and Elisha Bartlett; Rev. Mark Hopkins was president, as also of "William's College."

On receiving his diploma, he commenced the practice of medicine at Manlius, N. Y., and after a few months became associated in business with his former preceptor, Dr. Wm. Taylor, who was at that time a member of Congress.

In September (8th), 1834, he was married to Miss Anna A. White, of Manlius. In September, 1835, he removed to Michigan, and first settled at Clinton, Lenawee county, Michigan, and became associated in business with Dr. Alonzo Cressey, then a member of the Michigan Legislature. In 1839 he removed to Homer, Calhoun county, Michigan, where he

remained for many years. Soon after arriving there, he formed a partnership with Dr. Vernon Parks, which continued, however, something less than two years. He was postmaster at Homer during the administrations of Franklin Pierce and James Buchanan. He removed from Homer to Jackson, Mich., his present residence, in December, 1864.

Dr. Nims always took a close and active interest in the development and welfare of medical science. He was a member of the Onondaga County (N. Y.) Medical Society, the Calhoun County (Mich.) and Jackson County (Mich.) Medical Societies; and of the latter has been the efficient president for the past four years. He was elected a member of the American Medical Association in 1856, and of the Michigan State Medical Society in 1872, and in 1878 a member of its Judicial Council.

While he was never a man of strong body and vigorous health, yet he was always free from serious infirmity or disease, a fact due, probably, to his careful, regular, and temperate habits, persistently observed through life, and the total disuse of ardent spirits and tobacco. In 1859 he had the misfortune, as the result of a fall, to receive a fracture of the left femur at its neck, a casualty which has been the occasion of much inconvenience and suffering since, and from which he never wholly recovered.

Dr. Nims had always been in country practice; has incurred through many years the toils, anxieties, inconveniences, and troubles of all kinds that beset the pioneers of the profession in Michigan, and which carried so many to early graves.

Through a long and busy life his whole heart and soul have been given to his profession. While the record of such a life may not exhibit many startling cases of success in medical or surgical practice, yet as a chronicle of continuous toil, fidelity, and devotion to the cause of human life, it merits our honor and our homage. In later years he made a specialty of diseases of women.

Dr. Nims was very reticent in speech, and unobtrusive in manner, yet his heart was full of kindness and sympathy, as the true physician's heart always is. He always succeeded in maintaing a good understanding with his brethren, and securing their unfailing respect for his professional courtesy and ability; especially in consultations were his courtesy and fairness deserving the highest commendations.

Since 1850 he was a regular attendant upon the services of the Episcopal Church. His family consists of his wife and three children,—two sons and one daughter, all in mature life.

Dr. Nims died at Jackson, April 15, 1879, of pneumonia, after an illness of only five days He was interred at Jackson.

Resolutions of respect to his memory and worth were passed by the Jackson County Medical Society.

The death of Dr. Nims is a loss to the profession of the State. The maintenance of the character, honor, and dignity of the profession, and the estimate of its worth by the people, rests almost wholly with those faithful members who devote themselves exclusively to its practice among the people. To the sick such a practitioner is a boon, a faithful friend, in whom they hope and trust, and on whom they lean; to the community he is the representative light of the healing art when the meteoric flash of quackery dazzles and goes out, and to his brethren he is a guide, counselor, and friend. Such was Dr. Nims. Of him might be said: "We could better spare a better man."

ZENAS E. BLISS, M. D.,*

of Grand Rapids, Mich., was born at Poolville, Madison county, New York, July 4th, 1832. He was the son of Obadiah Bliss, of Rehoboth, Massachusetts, who was a man of energy and public spirit. His mother was a woman of deep spiritual faith.

Dr. Bliss received his early schooling at Chagrin Falls, Cuyahogo county, Ohio. His father was owner of a large woolen factory, and availing himself of the opportunity, the son became thoroughly acquainted with the business in all its branches. In 1850 he commenced the study of medicine, in the office of Drs. Harlan & Bliss, after which he entered the office of his brother at Ionia, Mich. He spent three years in study at the Michigan University, with an interval of several months' practice at Lowell, Michigan. He received his degree of M. D. in 1855, and settled in Ionia, where he remained six years, with the exception of one winter spent in attending clinical lectures in the hospitals of Philadelphia and New York.

In June, 1861, he entered the army as assistant surgeon of the 3d Regiment of Michigan Volunteers. He was commissioned surgeon of his regiment in October, and from that time served with it. He was engaged in the siege of Yorktown, the battles of Williamsburg, Fair Oaks, Seven Pines, and the seven

*Reported by Mrs. Bliss.

days' fight before Richmond, including Malvern Hill. After this campaign he was promoted by President Lincoln to the position of Surgeon of the United States Volunteers, and stationed at Baltimore, Maryland. His duties included the furnishing of the United States General Hospital, the temporary charge of invalid officers, and the charge of the National Hotel Hospital from July, 1863, until December, 1864. He was then appointed Purveyor of the United States Army, stationed at Baltimore. He continued in the discharge of these duties until February 2, 1866, when, his services being no longer needed, he was discharged with the title of Brevet Lieutenant-Colonel.

Dr. Bliss spent the winter of 1866 and '67 in Paris and London, attending clinical lectures. After his return he engaged in the practice of medicine at Grand Rapids, Mich., where he remained until the fall of 1874. His health being seriously impaired, he then withdrew from his professional labors and went to Europe. He returned to Grand Rapids in 1875.

He was a member of the Grand Rapids Medical and Surgical Society, the American Medical Association, and the American Public Health Association. In August, 1873, he was appointed by Governor Bagley a member of the State Board of Health, and resigned this commission soon after on account of declining health. He was President of the Board of United States Examining Surgeons for a number of years. He was an honored member of the Christian church since 1860.

On September 16, 1856, he married Marion Carr, only child of Archibald Carr, of Ionia, Mich., and of this union two daughters has been the issue.

In the character of Dr. Bliss, the mind and heart were in perfect unison; what his judgment approved his hand executed. Possessing an enthusiastic love for his profession, and having a mind enriched by long years of constant study, his experience was peculiarly favorable for the development of his powers. After his return to Grand Rapids he ceased practice in consequence of his health, which continued to fail rapidly, until on the 23d of April, 1877, he passed from life in the forty-fourth years of his age.

At a called meeting of the Grand Rapids Medical and Surgical Society, resolutions of the most complimentary character were adopted, a passage from one of which we here insert as expressive of facts worthy of record:

* By his death the medical profession of this city and State, and especially the Grand Rapids Medical and Surgical Society, lose an eminent and honorable member. He was energetic and enthusiastic in all that pertained to his calling. He was honorable in his intercourse with members of the profession, and ever courteous to all. His skill in the practice of all departments of his vocation, though especially of surgery, has been equaled by few, and surpassed by none of his co-workers; and his Christian fortitude and cheerfulness during his protracted sickness, are eminently worthy of our example. His life was an example of earnestness in the performance of all duties, professional and private, and his death removes one of our most honorable practitioners and upright citizens.

*Copied from "American Biographical History of Eminent and Self-Made Men," Michigan volume.

LIST OF MEMBERS PRESENT DURING THE ANNUAL SESSION OF 1879.

[The names of those elected at this session are printed in *italics*.]

Dr. *E. C. Adams*, Alamo.
Thos. Addison, Rockford.
A. W. Alvord, Clinton.
J. Andrews, Paw Paw.
G. P. Andrews, Detroit.
Geo. B. Ayers, Ann Arbor.
S. G. Banks, Detroit.
H. B. Barnes, Ionia.
C. V. Beebe, Howell.
J. H. Bennett, Coldwater.
A. W. Biker, Fenton.
Ira P. Bingham, Brighton.
John D. Bowman, Millburg.
J. B. Book, Detroit.
Judson Bradley, Detroit,
L. W. Bliss, Saginaw City.
John Brady, Grand Rapids.
Wm. F. Breakey, Ann Arbor.
Thos. H. Briggs, Mattawan.
S. H. Bristol, Parma.
Wm. Brodie, Detroit.
I. E. Brown, Monroe.
J. A. Brown, Detroit.
Nathan F. Brown, Detroit.
Wm. Brownell, Utica.
Carl Brummæ, Detroit.
A. M. Buckham, Parma.
Warren Byrns, Bronson.
A. E. Carrier, Detroit.
J. H. Carstens, Detroit.
Gordon S. Case, St. Louis.
C. A. Case, St. Louis.
J. S. Caulkins, Thornville.
E. P. Christian, Wyandotte.
G. W. Chrouch, Woodhull.
H. A. Cleland, Detroit.
E. H. Collier, Athens.
Leartus Connor, Detroit.
H. Henry Cook, Mason.
Edward Cox, Battle Creek.
Amos Crosby, Albion.
Dr. C. G. Cruickshank, Howell.
W. Decker, Mount Clemens.
C. C. Dellenbaugh, Portland.
A. P. Drake, Hastings.
S. P. Duffield, Dearbornville.
E. B. Dunning, Paw Paw.
E. S. Dunster, Ann Arbor.
J. Orton Edie, Grand Rapids.
W. H. Elliott, White Pigeon.
J. M. Elliott, Hickory Corners.
Jas. F. Encke, Detroit.
E. F. Ewers, Union City.
T. A. Fairbairn, Detroit.
B. H. Fairchild, Detroit.
D. O. Farrand, Detroit.
C. P. Felshaw, Ypsilanti.
I. W. Fletcher, Wayne.
S. S. French, Battle Creek.
R. A. French, Ypsilanti.
W. R. Gifford, Erie.
C. B. Gilbert, Detroit.
Wm. C. Gustin, Detroit.
L. S. Griswold, Sand Lake.
A. D. Hagadorn, Millford.
J. W. Hagadorn, Lansing.
S. H. Hagadorn, Bay City.
A. M. Haight, Albion.
Eleazar Hall, Saline.
D. C. Hauxhurst, Battle Cr'k.
A. M. Hawes, Detroit.
A. S. Heaton, Detroit.
H. O. Hitchcock, Kalamazoo.
A. F. Hoke, Detroit.
A. B. House, Memphis.
George Howell, Macon.
C. W. Hubbard, Davisburgh.
R. C. Hutton, Howell.
W. M. Ikeler, Three Rivers.
J. A. Jackson, Lapeer.
E. W. Jenks, Detroit.
J. H. Jerome, Saginaw City.

Dr. G. K. Johnson, Grand Rapids.
Augustus Kaiser, Detroit.
Thos. A. Kay, Woodhull.
J. H. Kellogg, Battle Creek.
F. P. Kenyon, Montague.
D. B. Kilpatrick, Woodland.
Amy G. Kimball, Jackson.
Amasa F. Kinnie, Ypsilanti.
H. N. Kirkland, Kalamazoo.
Peter Klein, Detroit.
Amos Knight, Eaton Rapids.
L. D. Knowles, Kendall.
T. J. Langlois, Wyandotte.
Kate Lindsay, Battle Creek.
C. J. Lundy, Detroit.
A. B. Lyons, Detroit.
Henry F. Lyster, Detroit.
Hugh McCall, Lapeer.
Thead A. McGraw, Detroit.
W. J. McHench, Brighton.
Donald Maclean, Ann Arbor.
A. C. Maclean, Ann Arbor.
J. Miller, Mt. Pleasant.
J. G. Millspaugh, Battle Cr'k.
C. W. Morse, Dowagiac.
J. J. Mulheron, Detroit.
R. N. Murrey, Flint.
A. W. Nichols, Greenville.
R. W. Odell, Ypsilanti.
R. C. Ogilvie, Port Hope.
A. B. Palmer, Ann Arbor.
John B. Park, Okemos.
Moses Porter, Kalamazoo.
Fred D. Porter, Detroit.
Foster Pratt, Kalamazoo.
Geo. E. Ranney, Lansing.
A. H. Reed, Napoleon.

Dr. *J. W. Robertson*, Detroit.
M. K. Ross, Detroit.
Chas. H. Sackrider, Mason.
H. B. Shank, Lansing.
Chas. Shepard, Grand Rapids.
Chas. S. Sheldon, Greenville.
Eugene Smith, Detroit.
Hamilton E. Smith, Detroit.
Edward S. Snow, Dearborn.
C. T. Southworth, Monroe.
D. C. Spaulding, Lyons.
W. B. Sprague, Battle Creek.
Samuel S. Stephenson, Detroit.
Morse Stewart, Jr., Detroit.
Chas. H. Stowell, Ann Arbor.
F. A. Tenny, Detroit.
J. R. Thomas, Bay City.
M. W. Tomlinson, Battle C'k.
G. W. Topping, DeWitt.
C. S. Tucker, Coldwater.
Horace Tupper, Bay City.
E. Twiss, Athens.
J. Vaughan, Springville.
V. C. Vaughan, Ann Arbor.
I. L. Verlade, Newport.
H. O. Walker, Detroit.
Elertus B. Ward, Detroit.
E. B. Ward, Laingsburgh.
N. W. Webber, Detroit.
A. F. Whelan, Hillsdale.
Eli Woodman, Farmington.
C. M. Woodward, Tecumseh.
A. L. Worden, Ann Arbor.
Hal. C. Wyman, Detroit.
C. C. Yeomans, Detroit.
W. H. Young, Nashville.
D. Zimmerman, Wayne.

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FOURTH VICE PRESIDENT—E. S. SNOW, M. D., DEARBORN.
RECORDING SECRETARY—GEO. E. RANNEY, M. D., LANSING.
TREASURER—GEO. W. TOPPING, M. D., DE WITT.

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EDWARD SNOW, Dearborn.

TWO YEARS.

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A. F. WHELAN, Hillsdale.

THREE YEARS.

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DR. R. C. KEDZIE, LANSING, Chairman.

DR. J. H. CARSTENS, DETROIT. DR. CHAS. S. SHELDON, GREENVILLE.

F. M. CALKINS, ALLEGAN. J. P. STODDARD, ALBION.

ON PAPERS AND SUBJECTS FOR DISCUSSION.

1st.—Practice of Medicine, etc.

DR. D. W. C. WADE, HOLLY, Chairman.

DR. LEARTUS CONNOR, DETROIT. DR. H. O. HITCHCOCK, KALAMAZOO.

2d.—Surgery, etc.

DR. THEO. A. MCGRAW, DETROIT, Chairman.

DR. WM. H. DECAMP, GRAND RAPIDS. DR. J. ANDREWS, PAW PAW.

3d.—Obstetrics, etc.

DR. E. S. DUNSTER, ANN ARBOR, Chairman.

DR. E. P. CHRISTIAN, WYANDOTTE. DR. S. S. CUTTER, COLDWATER.

4th.—Ophthalmology, etc.

DR. EUGENE SMITH, DETROIT, Chairman.

DR. R. N. MURREY, FLINT. DR. C. T. SOUTHWORTH, MONROE.

5th.—Committee on President Cox's Address.

DR. FOSTER PRATT, KALAMAZOO. DR. S. S. FRENCH, BATTLE CREEK.

CHAS. SHEPARD, G'D RAPIDS. PETER KLEIN, DETROIT.

I. E. BROWN, MONROE.

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Yr. Joined.	Names and Residences.
'79.	ADAMS, E. C., Alamo. *p.*
'79.	ADDISON, THOS., Rockford. *p.*
'77.	ALVORD, A. W., Clinton. *p.*
'73.	ANDREWS, J., Paw Paw. *p.*
'79.	ANDREWS, G. P., Detroit. *p*
'76.	ATCHISON, WM., Ortonville.
'78.	AYERS, GEO. B., Ann Arbor. *p.*
'71.	BACKUS, C. W., Three Rivers.
'70.	BAKER, H. B., Lansing.
'78.	BALLARD, L. ANN, Lansing.
'73.	BANKS, S. G., Detroit. *p.*
'70.	BARNES, H. B., Ionia. *p.*
'71.	BARNUM, B., Schoolcraft.
'76.	BATWELL, E., Ypsilanti.
'71.	BEEBE, C. V., Howell. *p.*
'73.	BENNETT, J. H., Coldwater. *p.*
'76.	BESSAC, H. B., Milan.
'79.	BIKER, A. W., Fenton. *p.*
'77.	BINGHAM, IRA P., Brighton. *p.*
'78.	BLANCK, ANDREW, Howell.
'79.	BLISS, L. W., Saginaw City. *p.*
'78.	BOWMAN, JOHN D., Millburg. *p.*
'79.	BOOK, J. B., Detroit. *p.*
'79.	BRADLEY, JUDSON, Detroit. *p.*
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'76.	BREAKEY, WM. F., Ann Arbor. *p.*
'71.	BRIGGS, THOS. H., Mattawan. *p.*
'77.	BRIGGS, J. W., Schoolcraft.
'69.	BRISTOL, S. R., Parma. *p.*
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'68.	BROWN, J. A., Detroit. *p.*
'75.	BROWN, NATHAN F., Detroit. *p.*
'78.	BROWN, J. A., Fowlerville.
'66.	BROWNELL, WM., Utica. *p.*
'66.	BRUMMÆ, CARL, Detroit. *p.*
'66.	BUCKHAM, A. M., Parma. *p.*
'78.	BURR, COL. B., Pontiac.

Yr. Joined.	Names and Residences.
'74.	BYRNS, WARREN, Bronson. *p.*
'75.	CARRIER, A. E., Detroit. *p.*
'73.	CARSTENS, J. H., Detroit. *p.*
'79.	CASE, GORDON S., St. Louis. *p.*
'79.	CASE, C. A., St. Louis. *p.*
'78.	CASE, HENRY, St. Charles.
'67.	CAULKINS, J. S., Thornville. *p.*
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'67.	CHRISTIAN, E. P., Wyandotte. *p.*
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'72.	CONNOR, LEARTUS, Detroit. *p.*
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'78.	CORWIN, R. W., Narrowsburg, N. Y.
'71.	*COX, EDWARD, Battle Creek. *p.*
'78.	CROSBY, AMOS, Albion. *p.*
'78.	CRUICKSHANK, C. G., Howell. *p.*
'74.	CUTTER, S. S., Coldwater.
'75.	DAKIN, DANIEL E., Owosso.
'77.	†DAY, JOHN, Geelong, Australia.
'78.	DECKER, W., Mount Clemens. *p.*
'73.	DELLENBAUGH, C. C., Portl'd. *p.*
'78.	DOCKREY, WM. E., Pentwater.
'71.	DRAKE, A. P., Hastings. *p.*
'78.	DRAKE, JOHN C., Oakley.
'76.	DU BOIS, SAMUEL, Unadilla.
'67.	DUFFIELD, S. P., Dearbornville. *p.*
'71.	DUNNING, E. B., Paw Paw. *p.*
'75.	DUNSTER, E. S., Ann Arbor. *p.*
'78.	EATON, O. P., Detroit.
'79.	EDIE, J. ORTON, Grand Rapids. *p.*
'74.	ELLIOTT, W. H., White Pigeon. *p.*
'79.	ELLIOTT, J. M., Hickory Corners. *p.*
'75.	ENCKE, JAS. F., Detroit. *p.*

* Ex-President. † Honorary. *p.* Present.